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THE OIL WEEKLY

OIL & GAS ENGINEERING

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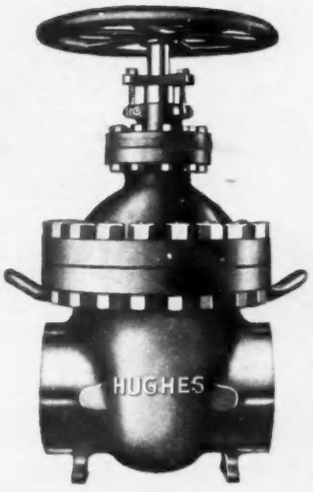

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October 23, 1931

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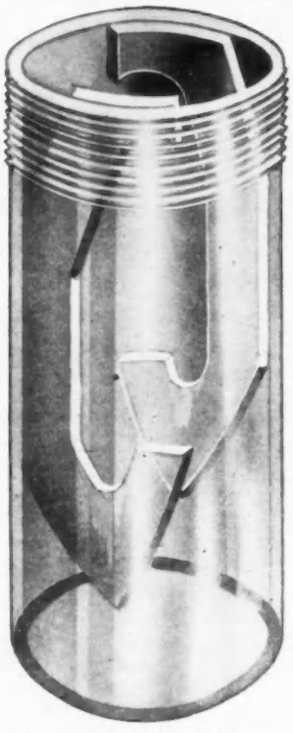

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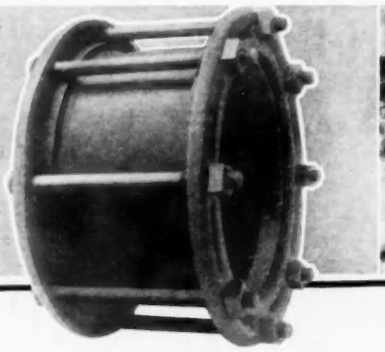

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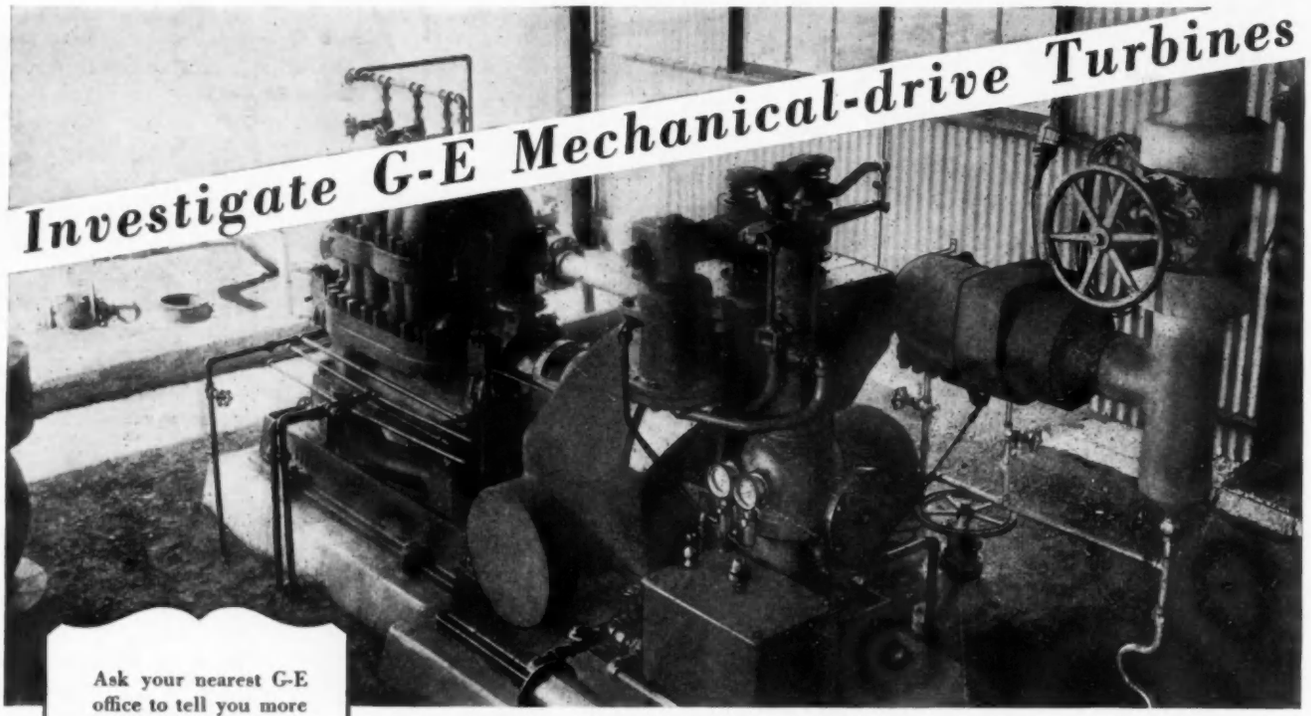

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THE OIL WEEKLY

October 20, 1931
Vol. 63, No. 6

S. W. ROBINSON
Editor

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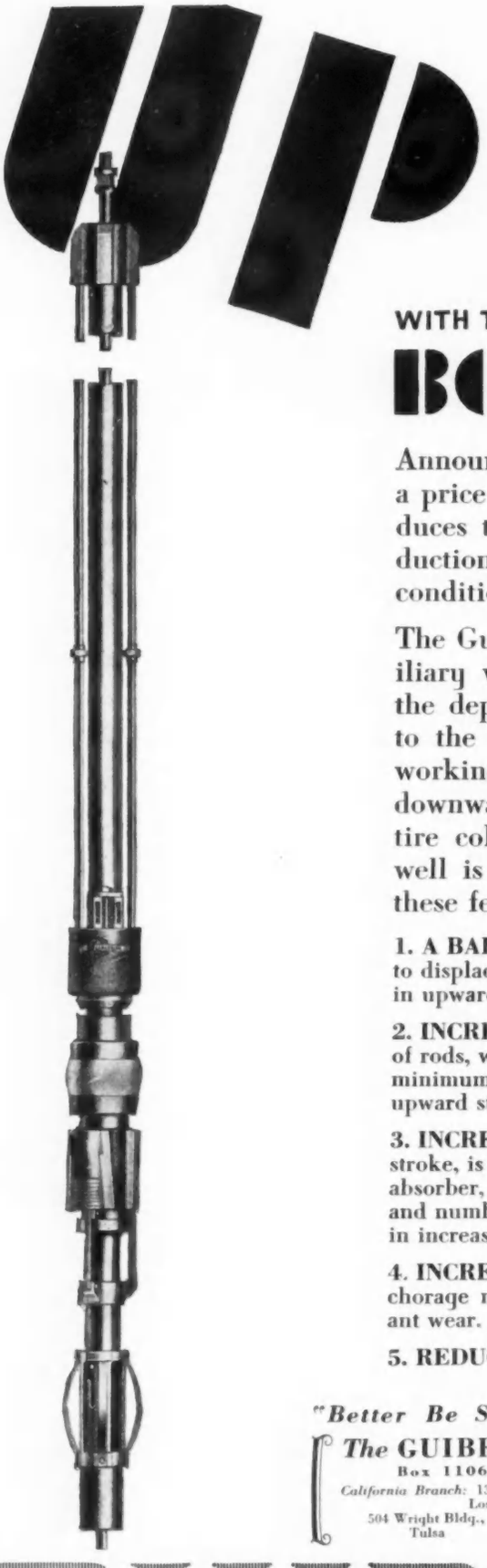

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OCT 24 1931

THE OIL WEEKLY

VOLUME 63, NO. 6 OCTOBER 23, 1931

Majority in East Texas Favors Curtailment Program

Small group which sponsored federal court attack given evidence of disapproval by operators and land owners

By H. H. KING
Staff Representative

TYLER, Texas.—Personal attacks being directed by East Texas operators, royalty owners and citizens at the group of operators and refinery owners who succeeded in obtaining a brief respite from proration enforcement through a temporary federal court injunction granted here October 13 lessens the possibility of others attempting to break down the martial law rule or proration orders of the state. Those favoring a return of unrestricted production in East Texas and the low prices and turmoil that have accompanied such policies in the past, are now very much in the minority.

Experiences during the past week of the group that sponsored the federal court attack against proration, such as being hissed when passing through a local hotel lobby, and criticized by former good friends, will make it more difficult in the future to obtain volunteers for test cases in the courts.

A court challenge as to the validity of martial law enforcement in East Texas has been considered by a group of independent producers, refiners and pipe line concerns for more than a month. The original plan was to form a $15,000 pool to cover the legal fees of a well known firm of lawyers at Austin to make the fight, with an individual operator volunteering to make the test case. The latter backed out on the plan, and then the group decided to create a Delaware corporation to make the test case, with J. D. Wrather and Eugene Constantine designated as plaintiffs. A switch was also made in attorneys, the anti-proration group having obtained the services of another well known legal firm it is said at a great saving over the fees named by the Austin attorneys.

One major company is rumored to have indirectly contributed legal and financial support to the federal court attack on proration last week, and this same concern is said to have prearranged its development and transportation program to be prepared for a wide open period of production in the field. The remainder of the major companies in the field are wholeheartedly in favor of rigid proration enforcement, although not necessarily the same method as now being carried out, for the balance of the off season for gasoline. Some of the latter group are not in accord with the present posted price of 68 cents per barrel.

Proration Effective

Except for an occasional rumor of some operator getting by with a few hundred barrels daily production over proration allowables, the East Texas field's proration program has been successful with the aid of the state militia. The constant threat of court martial if caught breaking the law is sufficient to discourage operators from openly defying the rules.

As long as the market price for East Texas crude remains near its present level, a greater majority of the operators are going to retain their friendly attitude in regard to proration. In the event Governor R. S. Sterling is overruled by the United States Supreme Court, or the President of the United States in the East Texas martial law order, it is quite probable that proration would fail immediately after the withdrawal of troops. Crude prices would likewise sink back to their former low levels of five to 20 cents per barrel, and then royalty owners would begin taking matters into their own hands. Strife will follow a return of these low prices, then ample grounds will be had for posting the militia in the area.

(*Continued on page* 38)

Drilling Under Pressure In California

By BRAD MILLS
Staff Representative

DRILLING under pressure has not been confined entirely to California, but installations for this practice have perhaps had a wider application here than in any other district. A variety of conditions, particularly those existing in the Lost Hills fields, which baffled operators, have been met through drilling under pressure. Such a variety of problems was conducive to arrangements which were both unique and efficient.

Drilling under pressure may become a necessity where a high water pressure is encountered, where the formation tends to heave, or where there is a large loss of fluid under unusual conditions. There may be a combination of these circumstances in a single well, and usually one trouble leads to others. The problems vary radically in different wells, and it has not been unusual to find one specific problem in one well partially or wholly absent in another well.

In all cases, however, drilling under pressure means simply this, and it is always necessary to maintain a pressure, in addition to that exerted by the normal column of rotary mud. Special equipment and a different technique are required, while a study of the action of each well is necessary to insure a fairly even progress in drilling.

Although the Standard Oil Company of California is now drilling under pressure in No. 6-29V, a test on the North Dome at Kettleman Hills, George F. Getty's No. 1A (now Lincoln Petroleum Company's Theta 1), a deep test in the Lost Hills field, was perhaps one of the most interesting drilling projects ever started in the state. Special pressure equipment was used in the latter, and the drilling of some 2000 feet under this arrangement was accomplished only after a series of problems had been met and solved. A high water pressure was encountered in the former's Middle Dome test, but the formation stands up well. In the Lost Hills test both a water pressure and heaving formations added to the difficulties.

The Lost Hills field is located in the San Joaquin valley of Kern County and has produced at various shallow levels up to 1500 feet for more than 20 years. Its relationship to Kettleman Hills immediately placed it in line for a test of the Temblor formation, which also proved productive at North Belridge, a few miles south and slightly west.

Drill pipe is snubbed in while drilling under pressure in Standard Oil Company's No. 6-29V on the Middle Dome at Kettleman Hills

Events leading up to the drilling of George F. Getty's No. 1A, with which we are chiefly concerned in this article, were interesting and indicated trouble ahead for any operator who attempted to drill toward deeper levels. The No. 1 well was started in August, 1930, and was drilled with ordinary rotary tools to a depth of 1200 feet with no more than ordinary difficulty. A string of 18⅝ inch casing was cemented at 1911 and drilling was continued. At a depth of 1545 feet a strong gas pressure was developed. A heavier mud was used and drilling was continued to a depth of 1845 feet.

Heaving shale and a heavy gas pressure reduced drilling speed between 1545 feet and 1845 feet, the heaving shale having plugged the bit several times. Special substances were mixed with the mud in an effort to overcome the heaving condition, but plastering of the walls of the hole was not completely accomplished. A blowout preventer was placed around the drill pipe and a pressure of 400 pounds applied to the hole. This caused circulation to come to the surface at points around the rig. Attempts were made to seal the crevices through which the circulation was coming to the surface, but these were unsuccessful and the hole was abandoned.

Started in September

George F. Getty's No. 1A, which is now being drilled by Lincoln Petroleum Company, was started in September, 1930, following the abandonment of No. 1. This second well was also drilled with ordinary rotary equipment to a depth of 1098 feet, where circulation was lost. A string of 18⅝-inch casing was cemented at 1000 feet, this step having been taken to eliminate the possibility of danger to the rig foundation through repeated attempts to plug the formation and establish circulation. Circulation was regained and drilling continued to 1371 feet, where heaving shale and gas gave trouble. The mud was increased to 125 pounds and some progress was made with the heavier mixture.

Around 1870 feet the loss of volume of circulating fluid was enough to cause suspicion, and it was found that circulation was coming up on

the outside of the 18⅝-inch casing and in the original hole. After drilling to 1921 feet a string of 11¾-inch casing was run and landed at 1916 feet. By using 125-pound mud it was possible to drill to 2068 feet. At this depth a very troublesome water sand was found, the flow of salt water having been estimated at 20,000 barrels, with a pressure of 1600 pounds and a temperature of 180° F. It was necessary to build up the circulating fluid to 125 pounds to offset the pressure exerted by the salt water, and next to impossible to hold back the encroachment for more than a few hours at a time. The expense of mud weight materials alone was more than the normal cost of drilling to a depth of 2068 feet. The fault did not lie in the failure of the weight materials, however, but should be attributed to a salt water condition which was unlike any previously found in California.

At this level pressure equipment was installed and drilling resumed against the heavy pressure of salt water. Under the arrangement it was unnecessary to use weighting compounds at all and the circulating fluid was reduced to an 85-pound drilling mud. A gas control and flush joint drill pipe were used, the arrangement requiring between 600 and 625 pounds of pressure to prevent salt water from entering the hole and thinning the mud. By maintaining a slightly higher pressure than 625 pounds, the water pressure was overcome, with the loss of from 50 to 100 barrels of mud daily. This loss to the formation was negligible when compared with former losses. It was necessary only to determine the exact pressure required to hold back the formation water, and to apply as much more pressure as was required to insure uniformity. This differential was always small. Higher pressures might have been maintained, but it would have meant greater losses of mud fluid to the formation, while accomplishing little if any more. The total pressure maintained was simply the column of fluid in the hole, plus 650 pounds. In keeping back the salt water and sand, bridging was eliminated. This had been a common trouble, due to material carried into the hole.

Maintenance of a pressure of 650 pounds naturally necessitated a departure in running and pulling out of the hole. When going into the hole through the double packer with 5-inch O.D. flush joint drill pipe, it was necessary to pull or force in the first few stands with the snubbing and pull-down clamps. After a few joints had been run the weight of the drill pipe was sufficient to overcome the pressure maintained in the hole and the drill pipe dropped without use of the device. In coming out of the hole, the upper section of the drill pipe was pulled, but it was necessary to reverse the action and hold back the last few joints with the snubbing device to prevent them from being blown from the hole. Drilling was continued in this manner to a depth of 2465 feet, where a leak was discovered. This leak was traced to a bad connection in the 11¾ inch casing at 500 feet. Cement was pumped down between the 11¾ inch and the 18⅝ inch casing and the leak was stopped.

Mud Too Heavy

Drilling was resumed with 84-pound mud and a pressure of 650 pounds against the formation. The bit stuck at 2180 feet, indicating that the mud was too heavy for conditions then prevailing in the hole. After the bit was released the weight of the mud was reduced to 72-75 pounds and good time was made to a depth of 3737 feet. At this point a gasket in the 13⅜ inch master gate blew out, and the 11¾ inch casing on which the larger valve was swedged was plugged to make the necessary repairs.

Other high pressure water zones were expected below 3400 feet and cores were taken every hundred feet as a precaution. At 3700 feet continuous coring was started. While taking the last core between 3753 and 3768 feet, the gauge recording the hole pressure jumped from 650 to 850 pounds. The mud in the hole thinned rapidly and was soon replaced by gas and water. The pressure climbed to 1300 pounds and it was evident that some unusual formation had been cut. Pumping in of sveral hundred barrels of cement failed to affect the pressure. A further mixture of 436 sacks of weighting compound also failed to have any effect, and it was evident that the mixture was being jetted out through the water courses at 2068 feet. Since it required no pump pressure to pump the weight material into the hole through the drill pipe with the drill pipe off bottom, it was evident that the fluid which came through the eyes of the bit was being carried rapidly into the water courses above the higher pressure gas and water entering the hole from the bottom. This condition existed with the drill pipe 20 feet off bottom. The new and deeper water and gas sand immediately created a new series of problems.

The water pressure of the formation at 2068 feet was about 1600 pounds, but the pressure at around 3764 feet must have been much greater, since it was sufficient to push the water, mud and any fluid pumped into the hole back into the formation at 2068 feet. This would have necessitated a much higher pressure to control the gas and water zone near the bottom of the hole, had drilling been continued under the original arrangement. . The bottom pressure was about 2100 pounds and required the normal mud pressure and 850 pounds additional pressure to prevent jetting upward into the formation at 2068 feet.

The cementing of a string of 8⅝ inch flush joint casing was expected to make deeper drilling possible under more favorable circumstances. Immediately after drilling into the high pressure gas area below 3750 feet, the casing pressure ranged up to 1300 pounds, requiring a pull of 25,000 pounds to force the drill pipe into the hole. This meant a pull of nearly 45,000 pounds would be required to force the first few joints of 8⅝ inch casing into the hole, not considering the friction of the packers. This necessitated a much greater downward pull than could be exerted by the special equipment then in use at the well.

A special method for overcoming the difficulty was devised. A special plug was fastened to the end of the drill pipe and run into the hole just as a drilling bit would have been run. The plug was equipped with special slips above the rubber packer which would permit it to go down into the hole but which would not be affected by pressure exerted from below. This plug was set near the bottom of the 11¾ inch casing after the slips were set, the top portion rotated to pull a tapered mandrel upward and forcing rubber sleeves against the walls of the casing tight enough to prevent fluid or gas from coming into the hole at this point. When the rubbers were set tight against the walls of the casing, continued rotation of the drill pipe to the right unscrewed a left hand thread above the plug and permitted the drill pipe to be pulled from the hole. This plug also contained a back pressure valve which was held open to by-pass the fluid while the plug was being run into the hole and was closed as soon as the left hand joint was unscrewed and the drill pipe released. After the plug was set, running of the casing into the hole was similar to an ordinary casing job, except that when the casing hit the plug it was pushed ahead and acted as a casing shoe guide while shutting off all hole pressure. This also

allowed any necessary changes of equipment to be made at the surface.

Heavy Pressures Met

The heavy water and gas pressures at 2068 and 3764 feet worked together to defeat ordinary casing practices and it was necessary to overcome a series of problems before running the 8⅝ inch casing. Running of the casing in the conventional manner might have led to jetting of the gas at 3764 feet up the hole and into the water courses at about 2068 feet. This would have resulted in a faulty cementing job. To overcome this possibility two expanding packers of the screw type were placed on the outside of the 8⅝ inch casing. The drilling packer for the five-inch drill pipe was removed from the top of the 11¾ inch casing and three packers were installed instead, the idea being to pack off between the 11¾ and 8⅝ inch strings.

In making up the string of casing an ordinary washover shoe was placed on the bottom joint, one screw type packer 21 feet off bottom and equipped with a back pressure valve below this packer and a special cement sleeve immediately above it, the outlet holes in the sleeve being restricted to three-fifths of the area of the outlet holes in the first packer. The second packer was specially designed and made of lead. Another back pressure valve was placed in the string about 110 feet off bottom and about 36 feet from the top packer. The two packers were used to insure at least one contact or shutoff between the 8⅝ inch casing and the walls of the hole, since it was necessary to separate the low pressure area at 2068 feet and the high pressure area at 3764 feet.

The 8⅝ inch casing was run in toe hole to the top of the plug and the stuffing boxes were closed. Enough pressure was applied at the top of the hole to equalize the pressure below and above the casing plug. The rubbers in the plug were expanded to the inside diameter of the 11¾-inch casing and naturally caused friction while going into the smaller hole. This necessitated the use of the snubbing device to apply the proper downward pressure to the casing. The casing was weighed carefully with weight indicator after reaching bottom and on moving upward and downward to detect a difference in weight due to friction at the top of the hole. The casing was rotated and the two wall packers set against the formation. It was possible to determine whether either or both of the packers had been set against the wall of the hole, since the pressure from the bottom of the hole had been shut off. This procedure was checked because: while rotating to compress the packers more power was required to turn the pipe with each additional revolution; a pressure of 850 pounds which had been constant started to fluctuate and gradually decreased to 650 pounds; on endeavoring to lift the 8⅝ inch casing it was observed that a greater pressure than before setting the packers; and there was a noticeable decrease in the volume of gas coming from the hole. In order to insure a water shutoff from above as well as from below, 125 sacks of cement were pumped in between the 11¾ inch casing and the 8⅝ inch at the top of the hole, following the cementing of the smaller string in the regular manner.

Cementing of the smaller string simplified matters and deeper drilling was possible with a minimum effort. The well was later drilled to a much greater depth, but it was not necessary to use the full pressure equipment after the more troublesome formations were cut. Lincoln Petroleum Company is now continuing the well and may be able to complete it in a new deep producing zone at about 5330 feet. The pressure equipment was manufactured by Doheny-Stone Drill Company and included draw works, rotary, gas control flush joint drill pipe and special pull-down equipment for handling the drill pipe.

A detailed description of the equipment in use at Standard Oil Company's No. 6-29V, a deep test on the Middle Dome at Kettleman Hills, does not properly belong in an article featuring such operations at Lost Hills, but under the general subject of drilling under pressure, a short description might not be out of place. The primary object here is to drill against the formation pressure and to prevent dissipation of the mud. A high pressure water zone was cut in this well below 5000 feet and salt water constantly cut the mud. Installation of a full pressure equipment has completely eliminated the trouble.

A pump pressure of about 1600 pounds is maintained, while the discharge pressure on the mud line is 1300 pounds. Special discharge beans, which are an adaptation of the ordinary flow bean, are used. Doheny-Stone draw works, rotary table and pressure equipment are used, while an Emsco draw works which was original equipment is used for snubbing in and out of the drill pipe.

Drilling under pressure seems to offer unusual promise where the formations heave or there is a loss of fluid to formations. The practice has been successful in the few districts where it was tried and it may hold a wider application than the average operator realizes.

Pressure equipment was used in drilling through water and gas formations in Getty and Lincoln Petroleum Company's No. 1 in the Lost Hills field

Ancient Coral Reefs and Oil Fields

West Texas geologists discover new manner oil accumulation

By RICHARD A. JONES
Geologist

THIS article has interest both for the scientist and the casual reader on geology. Mr. Jones takes us into the family life of the polyp whose remains become the coral which we familiarly associate with the South Sea Islands and old fashioned jewelry, and traces the ancestry of this organism back to when the Permian Basin of West Texas and New Mexico was a sea whose waters favored the genesis of coral whose fossil remains he shows have relation to oil deposits.

THE age-old saying, "There is nothing new under the Sun," does not hold true in the oil industry. The unending search for petroleum constantly uncovers new facts, new ideas. In none of the many sciences, which contribute to the progress and development of the oil business, is this continual discovery of the "new," better exemplified than in geology and its study of the accumulation of petroleum.

The first important new fact which geology found out about the location of oil pools was that they often occur in association with anticlines. Even with this stimulating and path-opening relation proven, there was still slowness in the realization that there might be various other kinds of geologic structure, which could be associated with oil and gas Fields. For example, in 1919 the writer was working in Kentucky in a faulted region. There was considerable prospecting for oil in the area, but both geologists and operators, even recently, did not consider faults favorably. The theory was that the petroleum had escaped along the fault planes and had been dissipated. It took the great Mexia field of 1920 and 1921 in East Central Texas to demonstrate that faults are very important things in the oil business.

In the last 10 years the attitude toward the relation of geology and oil has been changed to one of expectancy and search for new methods of accumulation. Petroleum reservoirs have been found to be dominated by many other things than anticlines and faults. Oil has been found in sand lenses, in terraces, in serpentine or altered igneous rock masses, in porous limestones without noticeable geologic structure, occasionally in synclines. The seismograph and torsion balance have been called in to explore the subsurface. Recent discoveries at the Barbers Hill field, near Houston, Texas, where large wells have been brought in under thick projections or shelves of salt, have even begun to cast doubt upon the accepted theories of salt dome shape.

However, in the past two or three years, the Permian Basin of West Texas has brought to light one of the most unexpected "new things" of geology and oil accumulation. The careful work of the geologists of that region has found that, in the Permian Basin, there is, in various cases, a close association between ancient, buried Coral Reefs and oil fields. This is surely "something new under the sun!"—possibly the most remarkable contribution that geology has yet made to the petroleum industry.

Until this discovery was made, it is not likely that any geologist ever thought about any connection between oil fields and fossil coral reefs. The two topics are apparently as far removed as the North and South Poles. Who would have dreamed that a coral reef could have anything to do with petroleum? In the following paragraphs the writer will discuss, in as non-technical a manner as the subject permits, this interesting and unprecedented relationship, commencing with the fundamental facts about corals and coral reefs.

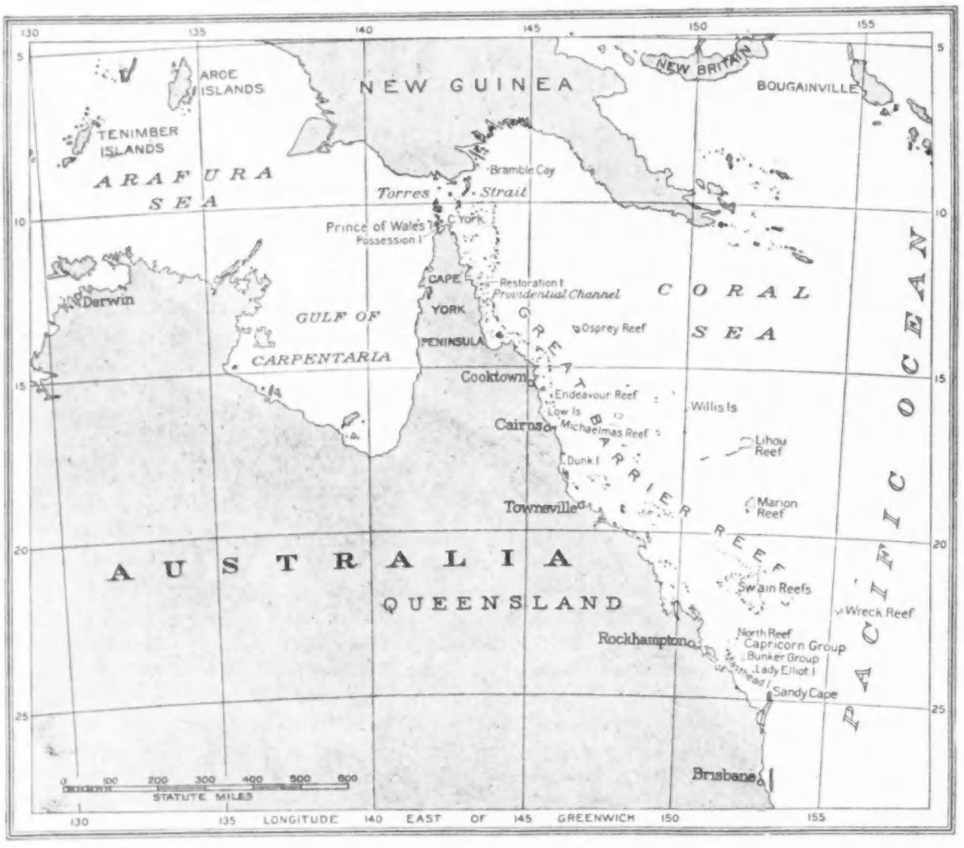
Corals

Corals are small, oceanic animals of a primitive order, the "Anthozoa" or "flower animals," low in the scale of living beings.. The real animal is the "coral polyp." The word "coral," strictly used, refers only to the rock or stony skeleton of the polyp.

The coral polyps are usually from less than one-fourth of an inch to an inch or more in diameter. A polyp consists of a soft, bag-like body, cntaining a stomach, a mouth, and a fringe of arms around the mouth by means of which they capture their food. They often display brilliant colors. The polyps possess the singular ability of being able to manufacture from the sea water, calcium carbonate or limestone, which they secrete as stony skeletons and bases, upon which the polyps rest. The accumulation of great masses of such skeletons of coral polyps forms coral reefs and islands.

Since in all except the earlier geological times corals have existed in a lesser or greater profusion, as shown by their remains in the sedimentary rocks. The paleontologist, in his study of ancient corals possesses only the "corallum" or skeleton, the soft polyps not being capable of preservation. The hard supporting framework, however, is secreted by the outer layer of the polyp and reproduces faithfully the form of the animal. The most ancient and simplest corals known are called "Archaeocyathidae," and are found in the Lower Cambrian.

As millions of years passed, other more advanced forms of corals appeared. The "tabulate" or honeycomb corals are first found in the Middle Ordovician and attained their



The Great Barrier Reef of Australia is 1200 miles long. It is the largest present coral reef and in the geologic past is only rivalled by the Capitan Reef System or the Guadalupian Barriers of the Permian Basin of West Texas and Southeast New Mexico. Map drawn by James M. Darley; from "The Great Barrier Reef and Its Isles," by Charles Barrett, National Geographic Magazine, September 1930

greatest numbers in Silurian and Devonian days. The word "honeycomb" clearly describes the aspect of these corals. Chain corals and organ-pipe corals are also numerous in these epochs.

The "Tetracoralla," or corals with their inside septa or partitions arranged in four quadrants, are likewise common fossils in the Silurian and Devonian. A subdivision of this type is the "cup coral," so called from its resemblance to a cup, or rather a drinking horn or funnel. The majority of cup corals are small, but fossils are occasionally found as much as two feet in length.

After Permian and Pennsylvanian time and the close of the Paleozoic era, a family of corals known as "Hexacoralla" became the most abundant type. The skeletons of these corals are arranged in six primary divisions. The hexacorals have persisted to the present. They are the commonest corals of today and the principal reef builders of present oceans.

The great majority of corals can exist only in clear, warm salt water of a depth of usually less than 150 feet, as will be more fully stated under the discussion of coral reefs. However, corals have now and then been dredged from the abysmal depths of the ocean from 10,000 to 11,000 feet. Between the depths of 600 and 2400 feet, there are zones of coral life, consisting of small delicate forms.

The majority of the corals which build reefs live together in colonies. These colonial masses of corals assume varied shapes. Some resemble the blossoms of enormous flowers. Others grow in the form of balls or of half-spheres. The largest of such "coral heads" may be 15 feet across. The "stag-horn" coral is a branching type resembling the antlers of a deer. In many cases these stag-horn corals attain a height of 12 or 15 feet, and are then called "coral trees."

As the coral polyps die, their limestone base is left, and new polyps start growing and building on the skeletons of the dead animals. Thus, the rock base on which the corals live continually grows larger and higher and wider. With the limestone framework left by the upward growing corals are the remains of other organisms. Small floating forms of vegetation known as "algae" secret lime, adding to the coral growth. Certain other sea plants, for example, those called "nullipores," also deposit limestone. Many kinds of marine shells, the bones of fish, and the tubes of salt-water worms are mingled with the corals. Fragments broken from the living coral are added by the waves to the ever accumulating mass. The ocean water cements the heterogenous pieces of coral and other organic debris into solid limestone. This mass of rock is a CORAL REEF. The reef rock rises until the top is just below the level of low tide, now and then laid bare for short intervals during the lowest tides, for corals can endure exposure to the air for only a brief period.

A coral growth in the clear, tropical waters, where corals best flourish, is one of Nature's wonders. The many different varieties of growing corals, from brightly hued spheres to tall, white or pink coral trees, make an aquatic jungle of surpassing beauty. Mingled with the coral thickets, sea plants of all kinds swing back and forth in the waves. Innumerable sea shells, large and small, in their natural, bril-

(Continued on page 35)

Extinguishing and Controlling Fire On Bell and Graddy Well

Paper presented before the September 24-25, 1931, meeting of the Southwestern District of the A. P. I. Division of Production, Lufkin, Texas

By E. STANLEY DURWARD
Mechanical Engineer, Shell Petroleum Corporation
Dallas, Texas

BEFORE proceeding with the detailed description of the methods and equipment used to extinguish the fire and control the wild Bell & Graddy well at Kilgore, Texas, it would be well to, first of all, make a few general observations on what would appear to the writer to be general principles upon which the method of extinguishing should be based.

Two general principles are usually followed in extinguishing an oil-well fire, as follows:

(1) The fire is extinguished and the well is brought under complete control with one operation.

(2) The fire is first extinguished with one set of operations and then the well is brought under control with a second set of operations.

It will be obvious to everyone that, if possible to accomplish, the first method is by far the more preferable and safest to use.

In almost all cases where the rate of flow, volume of sand, and all other conditions are such that no material damage is done to the well casing, cementing job, etc., a burning well that is consuming all the oil and gas produced is, in itself, not a source of much danger. For example, a wild well burned continuously for several years in Roumania and was no more a source of danger than when first ignited.

The only real danger from such a fire is to neighboring wells and property and this danger is present only if gas or oil be escaping from them or they are so near the fire that their well heads may be damaged by heat. A wild well from which oil and gas are escaping is a source of much greater danger because of the oil in sumps and on the ground for a considerable area around the well; if the escaping oil and gas does become ignited, then the area of the fire would not be confined to the well but would spread over a wide area, depending upon how long the well had been flowing before ignition took place.

For these reasons the writer believes that the first consideration in deciding on the procedure to extinguish a fire should be to determine whether or not it is possible under the circumstances to accomplish an extinguishment-control job all in one and only if this appears to be impossible should extinguishment first and control of the wild well afterwards be undertaken.

The Bell and Grady well at Kilgore, Texas, caught fire on June 23, while being swabbed and cleaned and is presumed to have been ignited from the extremely inflammable escaping gas which reached the boilers and flashed back to the well. This illustrates the absolute necessity for taking extreme precautions, in bringing in or working on wells in the East Texas field, to control and handle all oil and gas so that they can escape only at a safe distance from the well and from all other property such as tank batteries, etc.

Condition of Well

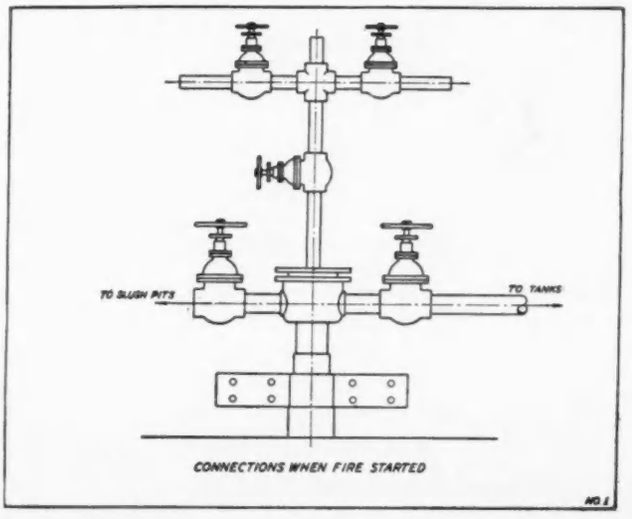
The condition of the well head when the fire took place was as follows:

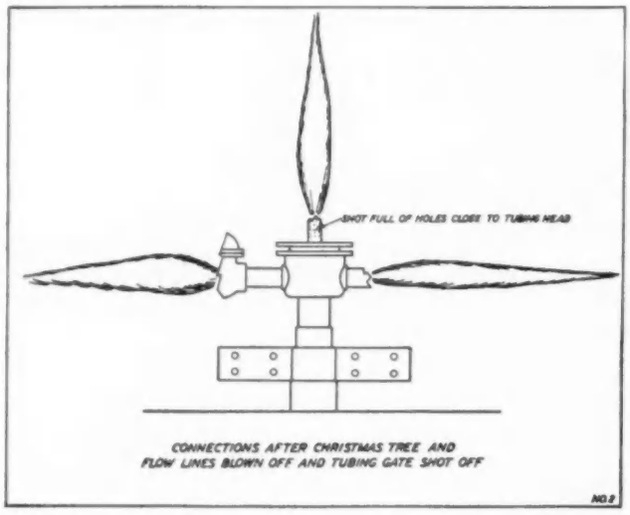
The seven-inch casing was setting on the top of the 10-inch surface string. On the top of the seven-inch casing was a casinghead with two side outlets fitted with valves, both of which were open. From one of these a flow line led to the tanks but the other had no pipe connections. Through the top of the casing head projected a 2½-inch tubing with a tubing gate and Christmas tree above it. The oil flow was estimated at 16,000 barrels per day with an estimated gas flow of 6,400,000 cubic feet based on a gas-oil ratio of 400 cubic feet per barrel.

Two days after the well caught fire an attempt was made to extinguish the fire with 20 quarts of nitroglycerin. This was unsuccessful but the Christmas tree was blown off leaving the damaged tubing gate from which flames shot up at an angle. The gates on the side outlets of the tubing head were also damaged and the flow line was blown off.

A successful attempt was made to shoot off the tubing gate with a machine gun and thereafter the flame from the tubing shot straight up into the air and flames shot out horizontally for a considerable distance from the two opposite side outlets on the tubing head.

Gulf Production Company and Shell Petroleum Corporation, which owned the offset wells, were then requested by the owners of the Bell and Graddy well to assist them in extinguishing the fire. The well was on low ground, very close to the tank batteries of offset wells; a nearby creek




SHOT FULL OF HOLES CLOSE TO TUBING HEAD
CONNECTIONS AFTER CHRISTMAS TREE AND FLOW LINES BLOWN OFF AND TUBING GATE SHOT OFF
NO 2

was a possible source of danger from flowing oil and presented difficulties in damming or levee work should such become necessary, and even if dams should be built, a heavy rain might destroy them. After considering all items it was decided to extinguish the fire and kill or control it in one operation, rather than assume the risks attendant upon controlling a wild well after the fire was extinguished.

Among other schemes considered was one practically identical to that used a short time later to control the Vitek well, viz., to insert a swing pipe and nozzle into the tubing, using a gasoline powered shovel, and force water or mud or both down the tubing until it should come up around the tubing and extinguish the flames on the side openings of the tubinghead and at the same time probably kill the well. It was finally decided, in the case of the Bell and Graddy well, to use the tunneling method, which it was considered offered more safety for the crews and permitted the installation of connections having greater volume capacity for mud and water.

Procedure

The well was situated near the base of the knoll or ridge, behind which ran a creek bed and fortunately the knoll was on the windward side of prevailing winds, all of which gave considerable natural protection for a close approach to the fire. Supplementing this natural protection, a sheet metal screen was erected above the point where the entrance for the tunnel was located. On June 28, five days after the fire started, work on the tunnel was begun at a point 175 feet from the well head. The tunnel was started by regular lease crews who were later replaced by a crew of professional miners from the Oklahoma coal fields. The tunnel, six feet high by four feet wide, was driven downwards at a slight angle and on July 15 it reached the well casing at a point about 25 feet below the surface.

In order to keep the air in the tunnel fresh and also remove any gas that might be encountered, a large Buffalo Blower driven by an electric motor was installed at the mouth of the tunnel, fresh air being conducted into the tunnel through a canvas pipe 10 inches in diameter which was attached to the roof of the tunnel and which was lengthened as the tunnel proceeded.

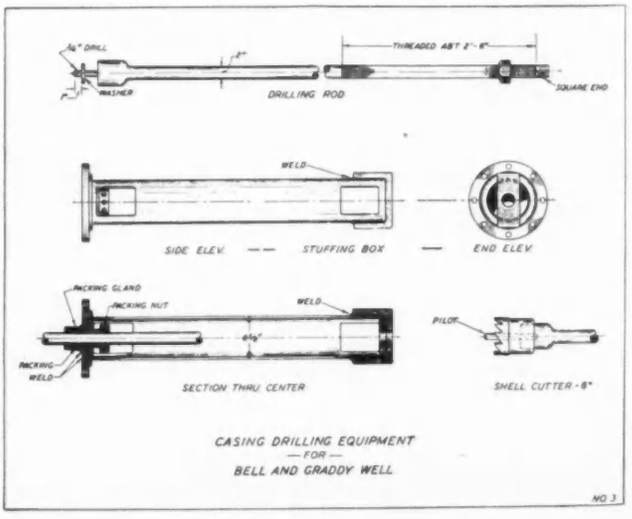
A pneumatic pavement drill with digging spade was used to speed up the work, air being furnished by a portable compressor outfit. As the tunnel proceeded electric lights were strung at intervals and safety extension cords and lamps were used to light the working face.

Seepage water was encountered after proceeding a short distance. At first this was kept out of the workings by a hand pump with fire-hose discharge pipe but later, as the quantity increased, it became necessary to install a small steam pump operated by compressed air. The pump was moved forward as work proceeded and kept close to the working face. The tunnel was heavily timbered and lined to prevent cave-ins. Every move was always fully considered and discussed before being carried out and everyone was made thoroughly conversant with the plans. Speed of doing the work was subordinated to safety and everything possible was done to provide against an accident. The work was completed with but one slight accident when one of the miners was hit by a falling stone; there were also two cases of heat prostration.

When the casing was reached, digging was continued until half the diameter of the 10-inch surface string was exposed. It was seen that this pipe was surrounded with three or four inches of packed sand, etc., which had settled down round it from the surface. Several things now had to be taken into consideration. The mouth of the 10-inch casing was open at surface with the seven-inch string supported on it by a set of casing clamps and holding tension in the seven-inch. The space between the seven-inch and 10-inch strings might be full of mud, baked hard by the heat transmitted down the casing from the surface. It might be open and, if tapped, hot oil might come down from surface. It might be full of water from some of the Artesian water sands which had broken in and washed out the mud. Was there any danger of the sand, etc., packed around the outside of the surface string caving down—it was only about 25 feet to the surface—and allowing hot or burning oil to get into the tunnel? Some signs of steam had been seen near the base of the fire but as the well was not drilled into the lower sand where there might have been water, it was thought the most probable source of the water was from an Artesian sand outside the seven-inch and that it had washed out the mud or had channelled up through it and was escaping from the 10-inch casing into the base of the fire.

Nipple Welded to Casing

First a six-inch by eight-inch nipple was electrically welded to the 10-inch casing and a gate valve installed having a nipple and flange on its outer end. To this was bolted a special "Y" branch having flanges on the run and threads on the branch. To this was bolted the drilling assembly, having a stuffing box and gland through which projected a spindle having a ¾-inch twist drill upon which was threaded a washer sufficiently far back from the cutting edge to allow the drill to completely penetrate the 10-inch casing but not pass on through against the seven-inch casing. After drilling a ¾-inch hole through the 10-inch casing, the drill was withdrawn beyond the gate; the



The Official Oil Doctor is on the Job

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IT is a most fortunate condition for the Petroleum Industry that among the thousands of types of "cut" oil, there are few, if any, that cannot be successfully treated. Oil men, therefore, have this dependable protection against serious loss.

By far, the best policy is to investigate emulsion problems and the Petreco Process of treatment before the need arises, making ample preparation for immediate and correct action when "cut" oil is encountered. Yet, in the absence of this preparedness, you may be assured that when the Official Oil Doctor and his staff take over your "cut oil" problems, they will immediately have the situation well in hand.

Whether you have "cut oil" problems now or not, you should be fully informed on the subject of crude oil emulsions. "The Electric Dehydrator" is the name of a publication issued at frequent intervals, which deals with emulsion and its treatment, for the purpose of keeping you so informed. If you do not receive this publication, send us your name and we will see that you do hereafter.

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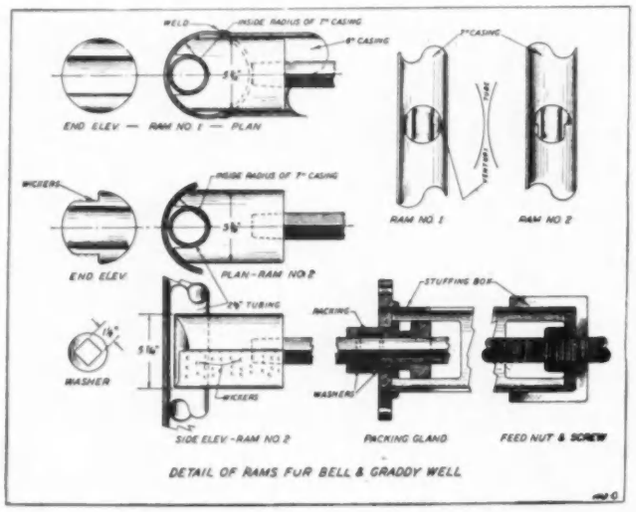


DETAIL OF RAMS FOR BELL & GRADDY WELL

gate was then closed and the drilling equipment removed. The gate was cautiously opened and hot water ran out in a diminishing stream until the flow practically ceased, thus indicating that the space between the two casings up to the surface had been emptied. It had been noticed that great piles of coke had formed around the well head and so it was considered that entrance from the surface was well chocked up and there was no danger of a downflow of hot or burning oil. The three-fourths-inch drill was replaced by a hollow milling tool and the drilling equipment was then bolted in place on the run of the "Y" fitting. The mill carried a blind pilot in the center to fit into the three-fourths-inch pilot hole already drilled in the 10-inch casing. A 5 7/16-inch disc was then cut out of the casing and withdrawn with the mill.

A six-inch line led from the "Y" branch, out through the tunnel and was connected to the flow tanks of an offset well. Into this line was also connected a line from the mud pumps at the offset well. As a precautionary measure 100 sacks of cement were pumped in between the 10-inch and seven-inch strings—this to prevent fluid of any kind coming down from above or up from below. While the cement was setting, the tunnel chamber was excavated completely around the casing. To tap onto the seven-inch casing two methods had been considered, either saddle and clamp or direct electric welding of nipples. Special all-steel forged and machined steel saddles with six-inch nipples screwed and welded in, were made, installed on a piece of seven-inch pipe, and tested under 750-pound pressure.

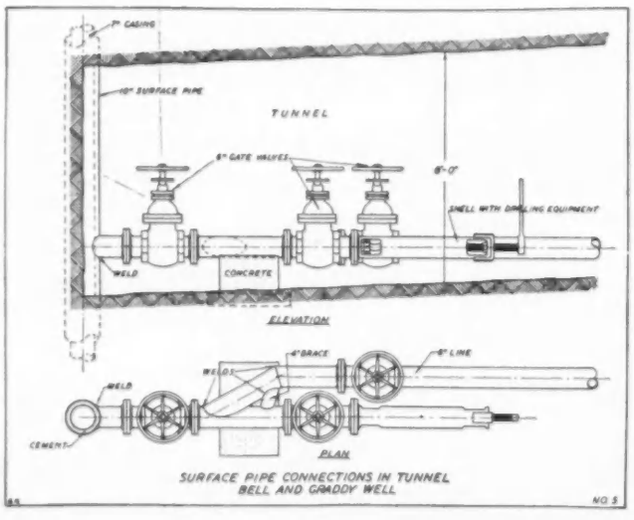
It was intended to use these in preference to welding on nipples as being a safer method. When it came to the final decision, electric welded nipples were used. If the clamps and saddles had been used it would have necessitated cutting out a complete section of the 10-inch pipe. This would have left the casing above the cut out section entirely unsupported except for the 25 feet of friction between tunnel roof and surface. Presumably the seven-inch casing and 2½-inch tubing were supported by clamps upon the 10-inch, therefore the short 25-foot length might slide down, causing a cave-in and allowing hot or burning oil to enter the tunnel. With the welding method it was not necessary to cut out an entire section of the 10-inch casing but only suffcient to allow of the passage of the six-inch nipples and sufficient additional space to permit welding.

Under these circumstances the welding method was adopted. No gas was present in the tunnel. With an acetylene torch the six-inch nipple welded to the 10-inch was cut away along with enough of the casing to allow inserting and welding six-inch nipples on the seven-inch casing. Cement was then chipped away and the nipple welded on. A second nipple was welded onto the seven-inch about two feet above the first one. Both nipples were then tested with hydraulic pressure to 700 pounds per square inch and found to be tight. Valves and drilling connections were then installed in the same fashion as when drilling the 10-inch casing. Pilot holes, then 5 7/16-inch holes, were cut through the seven-inch casing. To the lower of the two connections the same pipe connections as were used on the 10-inch string were connected. To the upper connection was attached an apparatus similar to the drilling outfit with the exception that the spindle was square instead of round and of course so was the packing gland. This square shaft was round at one end and threaded for a large nut. On the other end was a cylindrical ram or plunger very similar to a blow-out-preventer ram, having a nose curved to fit snugly against the interior of seven-inch casing and with a vertical groove to take 2½-inch tubing.

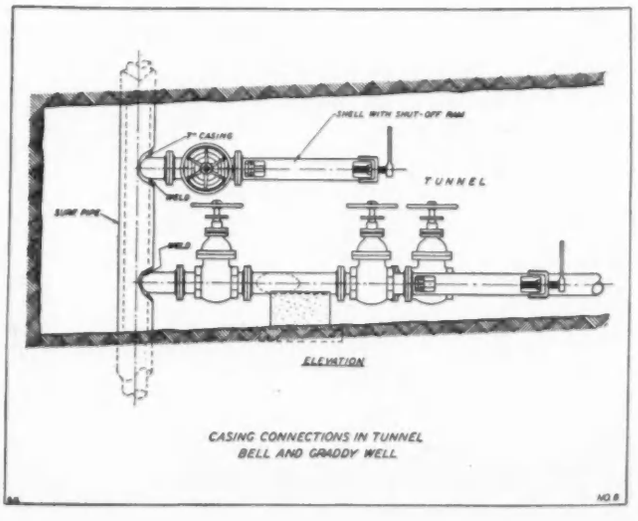
Ram Pushed Forward

This ram was pushed forward by the nut on the outer end. Measurements showed that it had not gone right back against the casing and it was thought there was a tubing collar opposite the ram, which being grooved for the tubing, therefore could not go over the collar. The ram was withdrawn, the groove widened out to take a tubing collar and again put back. This time it went into place. Little change, if any, was noticed in the flames from the tubing head side outlets but as there was a great deal of smoke

(*Continued on page 26*)



SURFACE PIPE CONNECTIONS IN TUNNEL
BELL AND GRADDY WELL



CASING CONNECTIONS IN TUNNEL
BELL AND GRADDY WELL

"A REMARKABLE RECORD" — says Dan O'Leary

D. O'LEARY, *Chief Engineer*
Roystone Pumping Station, Pennsylvania Gas Company, Ludlow, Penna.

"THIS valve has been in continuous service since we received it three years ago and up to now has never had any replacing or repairing done on it.

"This is certainly a remarkable record for a compressor valve."

TRANSIT COMPRESSOR VALVE

THE illustration at the right shows the TRANSIT Ring Plate Gas Compressor valve disassembled after three years of operation.

Both valve plates and seats show some wear. The seats were purposely made very narrow, their width being easily seen in the illustration. Wear on the valve guides is very slight, not more than 004″ or 005″ on diameter

Valve plates were in constant slow rotation. This is proved by the high polish on the back of the valve plates, where the buttons rested. The spring buttons themselves were somewhat reduced in diameter, and they also showed wear where they came in contact with the valve guard.

Eleven of the eighteen springs showed no perceptible wear The other seven showed wear, and had lost a coil or two. All springs, however, were sufficiently strong to exert force on the valve plates. In other words the valve was functioning perfectly when removed.

From appearances, we believe the valve would have operated for at least another year.

We manufacture a complete line of gas engine gas compressors. Of course, all are equipped with these new type valves.

We will also equip new or used compressors of any make with valve service of this type.

(From An Unretouched Photograph)

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Fire Prevention *and* Protection In East Texas

Paper presented before the September 24-25, 1931, meeting of the Southwestern District of the A. P. I. Division of Production, Lufkin, Texas

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THERE are many reasons why operators in the oil industry should give sincere and earnest attention to the prevention of fires. Oil field fires cause:

1. Unfavorable publicity for the entire industry.
2. Many fatalities and injuries to workers.
3. Great loss of property and equipment.
4. Unrestrained withdrawal of oil which may influence ultimate recovery from the producing sands.
5. Increased industrial accident compensation costs.

Whenever an oil field fire of any consequence occurs almost every daily paper in the United States carries the story to its readers. Naturally, if such scare head pieces of news are presented to the public frequently they will leave an impression in the reader's mind not favorable to the oil industry. If these news items most frequently tell of a disaster in the East Texas oil field, this area is getting publicity very unfavorable to the operators.

Information obtained from the Department of Accident Prevention, American Petroleum Institute, indicates that more fatalities in the oil industry are caused from fire and explosion than from all other causes put together. A report from the Industrial Accident Board of Texas tells us that 57 industrial fatalities occurred in the East Texas field during the first seven months of this year. The causes of these fatalities are as follows:

Fire and explosion	28
Falls	8
Crushed	7
Automobiles	2
Hernia	2
Gassed	2
Cave In	1
Airplane	1
Drowned	1
Electrocuted	1
Storm	1
Other Causes	3

A direct obligation rests upon us in the interest of our own welfare and the welfare of our fellow man to prevent the fires in our producing operations which are causing 50 per cent of the fatalities in the East Texas field.

Every well fire and every tank battery fire causes the loss of money. Usually the derrick or tank battery is destroyed and frequently large quantities of oil and much equipment is badly damaged. In town lots or other congested areas much surrounding property may be destroyed. Most companies carry fire insurance on derricks, drilling equipment and storage tanks but it must be remembered that although the insurance carrier pays for these losses by fire the rate of insurance charged for the area is sufficient to cover these losses and the greater these losses the higher the fire insurance premium is going to be.

Oil and Gas Depleted

Probably the greatest damage done by a burning well flowing out of control is in the depletion of oil and gas from the producing sand. Thousands of barrels of oil may be burned while a well is being brought under control but this loss may not be so great as the damage to the well's future. It is sometimes necessary to open offset wells to reduce withdrawal of oil from adjacent properties. The rapid unequal withdrawal raises the water level over the area and hastens the time of water encroachment into the producing sands. This means that the time before a pump must be used to lift the oil has been materially shortened and it is only too well known that when the pump is installed the lifting cost goes up and the question of water produced with the oil becomes a vital one. Operators cannot afford to jeopardize the future of their wells by letting them get out of control.

To calculate the value of a human life in cold cash is exceedingly distasteful, but the fact cannot be overlooked that industrial fatalities in East Texas during the first seven months of this year represent a cost of approximately $400,000 in industrial accident claims; and as one-half of these fatalities resulted from fire, $200,000 of this cost is chargeable to that cause.

The industrial accident insurance rates for drilling and producing operations are higher in Texas than in any of the other major oil producing states. Texas operators are paying $10.20 for each $100.00 of wages paid to drilling crews and $3.85 for each $100.00 in wages paid to production workers. These insurance rates are computed and established on actual claims paid during preceding years. As fires are the leader in causing fatalities, by preventing them and eliminating the fatalities and injuries incident to them insurance premiums for the industry in Texas can be reduced.

Fires in the East Texas oil field must be prevented to protect our reputation as capable operators, to protect our own lives and the lives of our fellow workers, to protect the property and equipment of the companies which are affording us profitable employment, to protect the life of the producing wells by preventing undue drainage from the sands, and to reduce our operating costs by reducing insurance rates.

The East Texas field produces a crude oil which gives off an exceedingly flammable vapor. Natural gas is produced along with the oil at the rate of about 350 cubic feet gas to each barrel of oil. When the oil reaches the flow tanks and is relieved of all well pressure the natural gas contained in

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the oil separates from it. The crude oil coming from the well gives up more than a usual amount of the hydrocarbon vapors.

A mixture of five to 15 per cent of natural gas with air constitutes a highly flammable mixture. The other petroleum vapors mixed with air in the proportion of one per cent to six per cent constitutes a flammable miximum. Therefore with a combination of the vapors coming from the wells or flow tanks in East Texas, a fire may be started where anywhere from one to 15 per cent of the vapors are mixed with air.

Vapors Heavier

The vapors coming from the tanks are heavier than air and have a tendency to stratify and hang close to the earth. They may travel some distance through low areas to a source of ignition and flash back to the tanks. The problem confronting the East Texas operators in preventing fires is one of confining or disposing of these vapors and keeping them away from sources of ignition or sources of ignition away from them.

Wells should be brought in under control and no oil permitted to spray or spill on the derrick floor to create flammable vapors. Wells can be swabbed or lubricated in without a drop of oil or cubic foot of gas being allowed to escape at the well head.

Waste oil should not be permitted to accumulate in sumps but should be disposed of by burning when there are no possibilities of igniting surrounding property.

Vapors from the separators should be piped to a safe location and burned at a riser. Vapors which cannot be confined within flow tanks should be piped away from the tanks to a safe place and disposed of through a riser. When natural gasoline prices justify the building of gasoline plants to take the vapors coming from the separators and stock tanks, the hazard of escaping vapors igniting at flow tanks will be greatly reduced. Restricted production of crude from the wells also reduces the amount of vapors at stock tanks. When wells capable of making 10,000 to 15,000 barrels of oil a day are allowed to flow wide open considerable pressure is built up on the separator and much of the vapor that should have been taken off at the trap goes into the stock tank where the crude is relieved of pressure and the vapors are released.

Under present conditions, with the knowledge that these flammable vapors may be present around wells and stock tanks, precautions must be taken to keep sources of ignition away from these areas.

Workers should know of the fire hazards and refrain from smoking in these areas and see that others such as hunters or visitors do not light matches to smoke. Automobiles should not be brought closer to tanks than 150 feet and then only up wind from the tanks as the hot motor, the exhaust or electrical system of automobiles are capable of igniting vapors.

With the coming of autumn, falling leaves and dry grass present another hazard. Tents and makeshift dwellings have been built through the fields without thought to the fire hazard. The occupants of these places of abode may not all understand the fire hazard of the area and fires may be transmitted through burning leaves and grass to stock tanks resulting in serious losses. And strange as it may seem, if damage to one of these homes or injury to its occupants occurs the oil company may be faced with a suit for damages. Every operator should give this situation attention and provide restricted areas in which people may make their homes.

Extinguishing and Controlling Fire On Bell and Graddy Well

(*Continued from page 22*)

there might have been more change than could be detected.

Through the lower connection was now "lubricated" cement sacks, oakum, asbestos fibre, etc., followed up by water. This had no effect as the material passed right on past the baffle in the upper connection. This was apparently due to the high velocity of the fluid around the sides of the baffle and to the circular faces of the baffle making, with the casing, a Venturi tube effect. The baffle was withdrawn and the sides milled off to flat surfaces. The sharp edges were then knicked with a chisel and center punched to make sharp wickers to catch the sacks, etc. On putting back the baffle, then lubricating in a few Baroid sacks rolled up into cylinders and folded over double and following them up with water an immediate shut off of the flow through the seven-inch casing was effected. Pumping of water was then continued and in a few minutes the water reached the bottom of the tubing and ascending with the flow suddenly extinguished the fire at the tubing and killed the well at 10:40 a. m. July 20. Casing head connections were then renewed. It was found that the nipple of 2½-inch tubing projecting above the casing head had been perforated by machine gun bullets to within an inch or so off the head thus leaving too little space for a rethreading job. The tubing was therefore cut off and a solid tap screwed into the tubing as a precaution until arrangements could be made to raise the tubing and change the top joint.

This description has been made in detail to illustrate the extreme care that must be taken on such jobs and how decisions are arrived at only after considering every possible situation. It must be understood that experiments on work of this character are impossible. It must be certain that, as far as is humanly possible, the procedure decided on can be carried out successfully.

The attached illustrations show the methods and equipment used.

Markets • Production • Crude Prices

H. J. STRUTH, ***Staff Economist, Houston, Texas***

Production Exceeds Economic Limit of 2,343,000 Barrels

Resumption of activity in Oklahoma fields, resulting in a state production gain last week of 254,050 barrels, boosted the national crude output to a point exceeding the economic limit to the extent of nearly 100,000 barrels. While the increase in Oklahoma was a normal consequence, it served to emphasize the need for corrective measures in Texas, where the excess output above allowable is shown to amount to more than 110,000 barrels a day. National crude production last week averaged 2,437,000 barrels daily, exceeding the previously established economic limit indicated on the production chart by about 94,000 barrels. This is the first time since the enforced curtailment beginning late in August, that production has exceeded the economic limit of 2,343,000 barrels. The increase in Oklahoma's production, combined with a further gain in Texas production accounted for a total increase of 274,300 barrels.

Texas production last week amounted to 1,010,700 barrels, an increase over the preceding week of 23,300 barrels. East Texas production was computed by the American Petroleum Institute at a daily average of 422,150 barrels, or 18,250 barrels above the average for the preceding week. The new allowable well limit, however, resulted in reducing the daily average of the East Texas area, toward the close of the week, to a total of about 385,000 barrels. Nevertheless, East Texas production continues to surge forward with the impetus given by the completion of new wells; and the status for last week indicated a daily excess over the economic limit of about 110,000 barrels.

That another downward revision may soon be initiated by the Texas Railroad Commission, is indicated by the rate of drilling. Last week new wells completed amounted to 113, having a combined initial production of about 950,900 barrels. Thus, even though the daily average output of the East Texas area had declined to 385,000 barrels, the quantity of new allowable production from wells completed last week automatically boosts the total back about the 400,000-barrel mark. It is believed that the next move by the commission will be to reduce the well limit to 150 barrels a day.

Comparison of last week's production figures with state allowables shows that Oklahoma's output is still about 40,000 barrels a day less than the economic limit proposed by the oil states advisory committee. On the other hand, Texas shows an excess above the 900,000-barrel limit of 110,000 barrels and California's excess amounts to about 20,000 barrels a day. With the uncertainty that continues to hover over the situation in East Texas is the news of federal court action in rendering a verdict in favor of injunction proceedings against restraining orders of the State of Texas. While this is not expected to result in an immediate over-throw of conservation in that area, it does cast a shadow over the probable course of events in the future. At any rate, regardless of the fact that the industry's statistical position has shown vast improvement, it is obvious that any hope for an immediate upward price adjustment in the Mid-Continent crude market is sidetracked for the present. Until some definite action is taken to eliminate existing uncertainties in East Texas, and until concerted action is taken to curb drilling, little or nothing can be expected in the form of market improvement.

Refinery Operations Excessive; Gasoline Stocks Show Increase

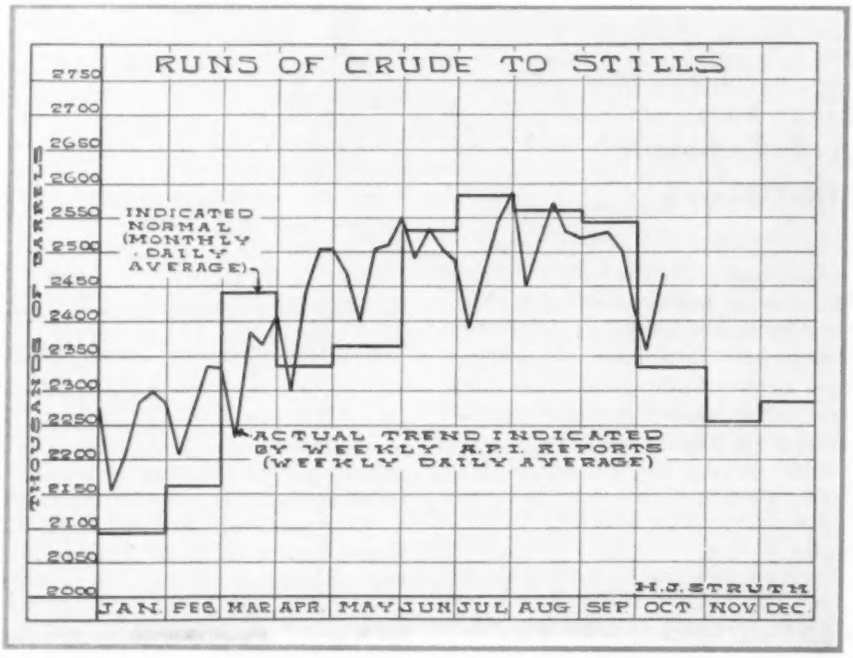
Crude runs through stills of refineries in the United States worked into higher ground last week, reaching a daily average of 2,515,000 barrels, on a Bureau of Mines basis. Reports of refiners to the American Petroleum Institute showed total runs for the week of 17,095,000 barrels, a daily average for reporting plants of 2,442,000 barrels. This was a gain over the preceding week of 42,000 barrels a day and a gain over the week ending October 3 of 151,000 barrels a day. As a result of increasing runs to stills, gasoline stocks turned upward last week, showing a gain over the preceding week of about 580,000 barrels. Total stocks of gasoline at refineries were reported at 30,836,000 barrels, which means that all stocks of this product, on a Bureau of Mines basis, are still about 34,400,000 barrels, or about 5,000,000 barrels above normal.

The accompanying chart, revised to show how actual runs compare with normal, on the basis of market requirements for gasoline, makes it quite evident that refiners have apparently cast aside any caution they might have exhibited up to now. Current runs to stills are now 183,000 barrels a day more than the economic limit dictated by the demand for gasoline. This turn is a most discouraging one, and if continued for even a few weeks, will quickly disrupt any benefits that might have accrued from control measures exercised up to now. The new chart shows, conclusively, that refiners have made a good showing throughout a major portion of this year and the upward turn in the curve is a radical departure from normalcy. That there is no sound reason for increasing still runs at this time is obvious, since all refiners know, or should know, that the demand for gasoline is tending toward a considerably lower level.

If refiners expect to clear up the unsatisfactory situation that prevails in the wholesale and retail gasoline market, they must trim their operating schedules to conform with the trend of demand over the balance of this year. The economic limit for still runs during October is about 2,335,000 barrels a day; during November the maximum should not exceed 2,250,000 barrels a day. Every barrel of crude runs in excess of these limits means surplus gasoline that must necessarily be carried over into next year. The limit for gasoline stocks at the end of this year is 30,000,000 barrels—to obtain that goal, refiners must reduce still runs to within the limits prescribed.

Casper, Wyo.—Standard Oil Company (Indiana) has announced its intention of immediately installing a new 6500-barrel cracking unit at its Casper refineries. The new plant will replace equipment which has become obsolete. Contract for the construction is let to M. W. Kellogg Company, and all labor is to be hired locally with old company men now laid off to be given preference over all. It will require about nine months to complete the work.

MARKET SECTION



Unsatisfactory Refinery Situation Reported by A. P. I. Committee

New York, N. Y.—A report of the A. P. I. committee on refinery statistics and economics, reviewing the status of refinery operations, shows that conditions are unsatisfactory. Crude runs to stills during July, August and September were maintained at a rate in excess of normal to the extent of about 193,000 barrels a day. These runs of crude were expected to provide a surplus stock of gasoline on September 30, 1931, of 5,800,000 barrels, with the prospect that the surplus will amount to a total of 7,200,000 barrels by the end of the year, if operations are not curtailed immediately. It is pointed out in the report that these surplus stocks are sufficient to prevent stabilization of this branch of the industry.

In order to correct the unsatisfactory picture in the refining branch of the industry, the committee suggests that runs to stills be curtailed during October, November and December to a maximum daily total of 2,200,000 barrels. This would mean a reduction of 380,000 barrels a day under the rate prevailing during September. The report states that until such time as the industry experiences a return to normal demand for their products, it is absolutely vital that they conduct their operations

Crude Runs to Stills, Gasoline Stocks and Gas and Fuel Oil Stocks

Week Ending October 10, 1931
(Figures in barrels of 42 gallons)

District	Potential Capacity (Daily) Total	Reporting	Per Cent	Crude Runs to Stills Total	Daily Average	Per c't Operated	Gasoline Stocks (see note below)	Gas & Fuel Oil Stocks
East Coast	633,700	633,700	100.0	3,337,000	476,700	75.2	3,949,000	10.540,000
Appalachian	149,600	137,400	91.8	701,000	100,200	72.9	1,267,000	1,526,000
Ind., Ill., Ky.	436,300	431,500	98.9	2,237,000	319,600	74.1	3,616,000	5,124,000
Okla., Kans., Mo.	485,700	435,200	89.6	1,737,000	248,100	57.0	2,803,000	5,107,000
Texas	838,200	765,400	91.3	3,748,000	535,400	70.0	5.199,000	11,419,000
Louisiana-Arkansas	233,100	230,500	98.9	1,163,000	166,100	72.1	780,000	3,499,000
Rocky Mountain	159,400	142,300	89.3	378,000	54,000	37.9	1,275,000	821,000
California	912,500	886,100	97.1	3,500,000	500,000	56.4	*11,364,000	97,174,000
Total week Oct. 10	3,848,500	3,662,100	95.2	16,801,000	2,400,100	65.5	30,253,000	135,210,000
Total week Oct. 3	3,848,500	3,656,100	95.0	16,036,000	2,290,900	62.7	30,368,000	135,580,000
Total Oct. 11, 1930	3,730,100	3,566,900	95.6	16,597,000	2,371,000	66.5 (a)	35,588,000	139,457,000
The Texas and Louisiana Gulf Coastal figures shown below are included above in the totals of their respective districts.								
Texas Gulf Coast	532,500	531,500	99.8	2,877,000	411,000	77.3	3,884,000	8,095,000
Louisiana Gulf Coast	147,500	147,500	100.0	804,000	114,900	77.9	585,000	2,556,000

Note: In all the refining districts except California, figures in this column represent gasoline stocks at refineries. In *California, they represent the total inventory of finished gasoline and engine distillate held by reporting companies wherever located within continental United States—(stocks at refineries, water terminals and all sales distributing stations, including products in transit thereto).

(a) Revised in Indiana-Illinois district, due to transfer to "Bulk Terminals" of stocks previously reported as "At Refineries".

MARKET SECTION

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

State—	Indicated Demand Fourth Quarter 1931	Economic Limit Fourth Quarter 1931	Daily Average Last Week	Daily Excess Last Week	Daily Average Since January 1	Daily Excess Since January 1†
Arkansas	56,000	50,000	37,950	—12,050	44,595	—9,805
California	500,000	487,500*	507,400	19,900	523,688	30,188
Kansas	113,000	110,000	101,900	—8,100	106,633	—5,367
Louisiana	75,000	60,000	59,850	—150	63,193	—7,307
Oklahoma	525,000	546,000*	505,600	—40,400	463,613	—52,887
Texas	860,000	900,000*	1,010,700	110,700	889,158	130,458
Balance of U. S.	214,000	210,000	213,600	3,600	207,442	—26,333
Total	2,343,000	2,363,500	2,437,000	83,500	2,298,322	58,947

*Allowable.
†Excess based on allowable to date.

at such levels that economic stocks will be maintained at all times.

The committee projected stocks of gasoline for September 30 and December 31, 1931, showing that stocks as of September 30 probably aggregated 33,000,000 barrels, against an economic limit of 27,200,000 barrels, leaving a surplus of 5,800,000 barrels. On this basis, it is assumed that stocks of gasoline on December 31 will reach a total of 37,500,000 barrels, against an economic limit of 30,300,000 barrels, or a surplus of 7,200,000 barrels. Analysis of stocks of gasoline by major refining districts shows that California is charged with having the greatest surplus supply, an excess over the economic limit as of September 12, 1931, of 4,718,000 barrels. The Mid-Continent area is charged with having an excess gasoline supply in storage of about 1,715,000 barrels. The combined excess of the United States as of September 12 appeared to have amounted to 4,953,000 barrels. The report also stresses the fact that stocks of gas and fuel oil are piling up at an excessive rate. The increase in these stocks from March 31 to August 31 amounted to 11,145,000 barrels, despite the fact that stocks on March 31 were lower than they had been for three prior years.

Cracked Gasoline Production

Week Ending October 10, 1931

(Barrels of 42 gallons)

	Potential Charging Capacity Total	Daily Reporting	%	Production Total	Daily Average
East Coast	231,300	236,300	90.4	669,000	95,600
East Coast	261,300	236,300	90.4	669,000	95,600
Appalachian	56,300	54,100	96.1	184,000	26,300
Ind., Ill., Ky.	330,400	315,400	95.5	623,000	89,000
Okla., Kans., Mo.	237,800	219,500	92.3	401,000	57,300
Texas	450,800	436,200	96.8	968,000	138,300
Louisiana-Ark.	112,400	112,400	100.0	289,000	41,300
Rocky Mountain	99,100	97,600	98.5	122,000	17,400
California	190,800	190,800	100.0	210,000	30,000
Total week Oct. 10.	1,738,900	1,662,300	95.6	3,466,000	495,200
Total week Oct. 3.	1,738,900	1,662,300	95.6	3,389,000	484,200
Total Oct. 11, 1930.	1,589,200	1,328,600	83.6	2,760,000	394,300
The Texas and Louisiana Gulf Coastal Figures Shown Below are included above in the totals of their respective districts.					
Texas Gulf Coast	352,400	347,400	98.6	777,000	111,000
La. Gulf Coast	77,000	77,000	100.0	219,000	31,300

Imports of Petroleum at Principal United States Ports

(Barrels of 42 gallons)

	Week Ended Oct. 10		Week Ended Oct. 3
AT ATLANTIC COAST PORTS—			
Baltimore	287,000	(a)	280,000
Boston	183,000		.....
New York	689,000	(a)	585,000
Philadelphia	210,000		150,000
Others	316,000		35,000
Total	1,685,000		1,050,000
Daily Average	240,714		150,000
AT GULF COAST PORTS—			
Galveston District	.....		65,000
New Orleans & Baton Rouge	40,000		43,000
Port Arthur & Sabine District	65,000		.....
Tampa	.....		57,000
Total	105,000		165,000
Daily Average	15,000		23,571
AT ALL UNITED STATES PORTS—			
Total	1,790,000		1,215,000
Daily Average	255,714		173,571
Daily Average Four Weeks Ended	221,464		198,714
Distribution of Total Imports is as follows:			
Crude	1,032,000		583,000
Gasoline	301,000	(a)	167,000
Fuel Oil	457,000	(a)	465,000
Total	1,790,000		1,215,000

(a)—Revised.

Receipts of California Oil at Atlantic and Gulf Coast Ports

(Barrels of 42 gallons)

	Week Ended Oct. 10		Week Ended Oct. 3
AT ATLANTIC COAST PORTS—			
Baltimore	.....		.....
Boston	.....		.....
New York	155,000		153,000
Philadelphia	114,000		135,000
Others	38,000		14,000
Total	307,000		302,000
Daily Average	43,857		43,134
AT GULF COAST PORTS—			
Total	25,000	(a)	87,000
Daily Average	3,571		12,428
AT ATLANTIC AND GULF COAST PORTS—			
Total	332,000		389,000
Daily Average	47,428		55,571
Daily Average Four Weeks Ended	51,321		48,321
Distribution of Total Receipts of California Oil is as follows:			
AT ATLANTIC COAST PORTS—			
Gasoline	307,000		302,000
Total	307,000		302,000
AT GULF COAST PORTS—			
Gasoline	25,000	(a)	87,000
Total	25,000		87,000

(a)—Revised.

MARKET SECTION

United States Daily Average Production

1930	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July	594,750	121,600	652,350	209,400	40,550	55,400	137,200	98,350	610,450	2,520,050	78,121,200
August	558,850	115,650	646,400	206,600	41,500	55,160	128,550	106,000	611,250	2,470,900	76,597,600
September	558,900	116,550	606,550	200,750	40,150	53,550	121,400	110,650	604,900	2,413,400	72,402,205
October	542,100	114,850	609,500	194,850	41,500	52,800	121,750	104,000	590,800	2,372,150	73,536,350
November	491,550	111,400	579,350	190,100	44,050	52,000	116,400	101,950	601,200	2,288,000	68,639,150
December	459,300	105,550	533,400	189,300	43,000	51,100	112,200	100,500	587,450	2,181,800	67,636,500
1931											
January	452,000	106,350	511,050	188,850	41,100	50,700	110,300	96,700	535,700	2,092,750	64,874,450
February	473,750	114,450	523,700	185,600	43,950	49,950	109,800	100,100	527,300	2,128,600	59,600,450
March	531,900	110,550	585,000	177,950	40,250	47,550	108,800	95,400	528,100	2,225,500	68,990,850
April	543,650	109,250	723,050	185,850	39,050	47,000	111,500	95,500	527,350	3,382,200	71,465,750
May	561,950	107,400	767,200	185,950	39,200	46,650	111,250	97,500	534,150	2,451,250	75,975,950
June	556,850	103,150	828,250	170,100	36,500	44,900	108,950	97,950	520,300	2,466,950	74,009,750
July	527,950	100,000	912,250	157,850	33,650	41,400	107,600	94,400	517,900	2,493,000	77,282,700
August	306,150	101,900	976,800	153,550	30,400	37,650	109,600	92,900	510,900	2,319,050	71,890,200
September	261,050	104,600	752,250	149,950	29,600	38,000	117,400	92,250	505,550	2,050,650	61,518,950
Oct. 3	273,500	107,250	836,450	150,750	29,200	37,600	123,600	91,400	497,700	2,147,450	15,032,150
October 10	251,550	107,600	865,200	151,200	28,900	37,500	121,400	92,950	505,500	2,162,700	15,138,900
October 17	505,600	101,900	886,650	154,400	29,500	37,950	120,300	93,300	507,400	2,437,000	17,059,000
Increase	254,050	.....	21,450	3,200	600	450	.....	350	1,900	274,300	1,920,100
Decrease	.....	5,700	.....	.....	.....	.....	1,100	.....	.....	.....	.....

Last Week's Daily Average Production by Districts

TEXAS	Oct. 17	Oct. 10
Panhandle	64,850	64,500
North Texas	56,900	53,750
West Central Texas	27,000	26,800
West Texas	202,400	203,350
East Central Texas	56,200	57,750
East Texas	422,150	403,900
Southwest Texas	57,150	55,150
Texas Gulf Coast	124,050	122,200
Total Texas	1,010,700	987,400
OKLAHOMA	505,600	251,550
CALIFORNIA	507,400	505,500
KANSAS	101,900	107,600

LOUISIANA	Oct. 17	Oct. 10
North Louisiana	29,500	28,900
Louisiana Gulf Coast	30,350	29,000
Total Louisiana	59,850	57,900
ARKANSAS	37,950	37,500
MOUNTAIN STATES		
Wyoming	37,450	37,650
Montana	7,450	7,600
Colorado	4,750	4,550
New Mexico	43,650	43,150
Total Mountain States	93,300	92,950
EASTERN STATES	120,300	121,400
TOTAL UNITED STATES	2,437,000	2,162,700

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	2	0	2	0	0	0	0	0	987	0
California	2	1	2	1	0	0	0	0	625	25
Illinois	0	2	0	0	0	0	0	2	0	0
Indiana	6	1	0	0	2	0	4	1	0	0
Kansas	11	14	4	9	4	3	3	2	1,275	5,245
Kentucky	9	15	3	6	5	6	1	3	145	36
Louisiana	5	4	1	2	1	0	3	2	25	2,000
Michigan	2	5	1	2	1	2	0	1	750	2,000
Mississippi	2	0	0	0	1	0	1	0	0	0
New York	5	1	4	0	1	1	0	0	15	0
Ohio	14	24	3	2	6	13	5	9	54	2
Oklahoma	9	14	5	6	1	5	3	3	33,250	46,717
Pennsylvania	20	4	16	1	3	3	1	0	55	2
Texas	157	171	133	139	4	3	20	29	958,120	1,017,668
West Virginia	7	14	1	0	2	12	4	2	1	0
Totals	251	270	175	168	31	48	45	54	995,302	1,073,695
Increase	..	19	7	..	..	17	..	9	.....	78,393
Decrease	19	..	..	7	17	..	9	..	78,393	.....

Comparison of Permits Granted for New Wells

State—	For Week Ending Oct. 17	Previous Week	This Week 1930	Total This Month	This Month 1930	Total this Year	Total This Date Last Year	1930 Year Total
Arkansas	0	0	0	1	11	28	87	108
California	7	5	29	17	122	304	747	922
Louisiana	1	11	13	13	81	258	817	948
Kansas	3	12	19	22	80	365	832	944
Oklahoma	15	18	37	39	218	675	2,460	2,830
Texas	243	199	93	627	492	5,240	6,157	7,052
Total	269	245	191	719	1,004	6,870	11,100	12,804

MARKET SECTION

California Production Rise Very Slight for Past Week

State production was up a few thousand barrels at the end of last week, but the present period should witness only a moderate upturn over the previous week, and may not show an increase at all when actual figures are available. The jump of more than 10,000 barrels two weeks ago was caused by small increases at Kettleman Hills, Dominguez and a few of the smaller fields and was not the result of a more lenient attitude of operators. The average for the latter part of October should be about 505,000 barrels.

The scarcity of light crude in the Los Angeles basin has removed nearly all of the loose crude which formerly found a heavy market, due to the policy of the principal purchasing companies which took only the correct allotments. Several refineries are now requiring more oil than they are receiving and are consequently drawing on their limited storage. The larger companies have come to their rescue in a few instances and no legitimate refiner has failed to get all the oil he needed. The excesses in certain fields created a surplus which was a disturbing influence on the market.

Standard Oil Company of California's offer of a reward for information leading to the arrest and conviction of persons evading the payment of state gasoline taxes affected the production of crude to some extent, as the trouble apparently starts "at the mouth of the oil well." This leaves the impression that the tax evasion "racket" may be traced all the way from the field to the gasoline pump.

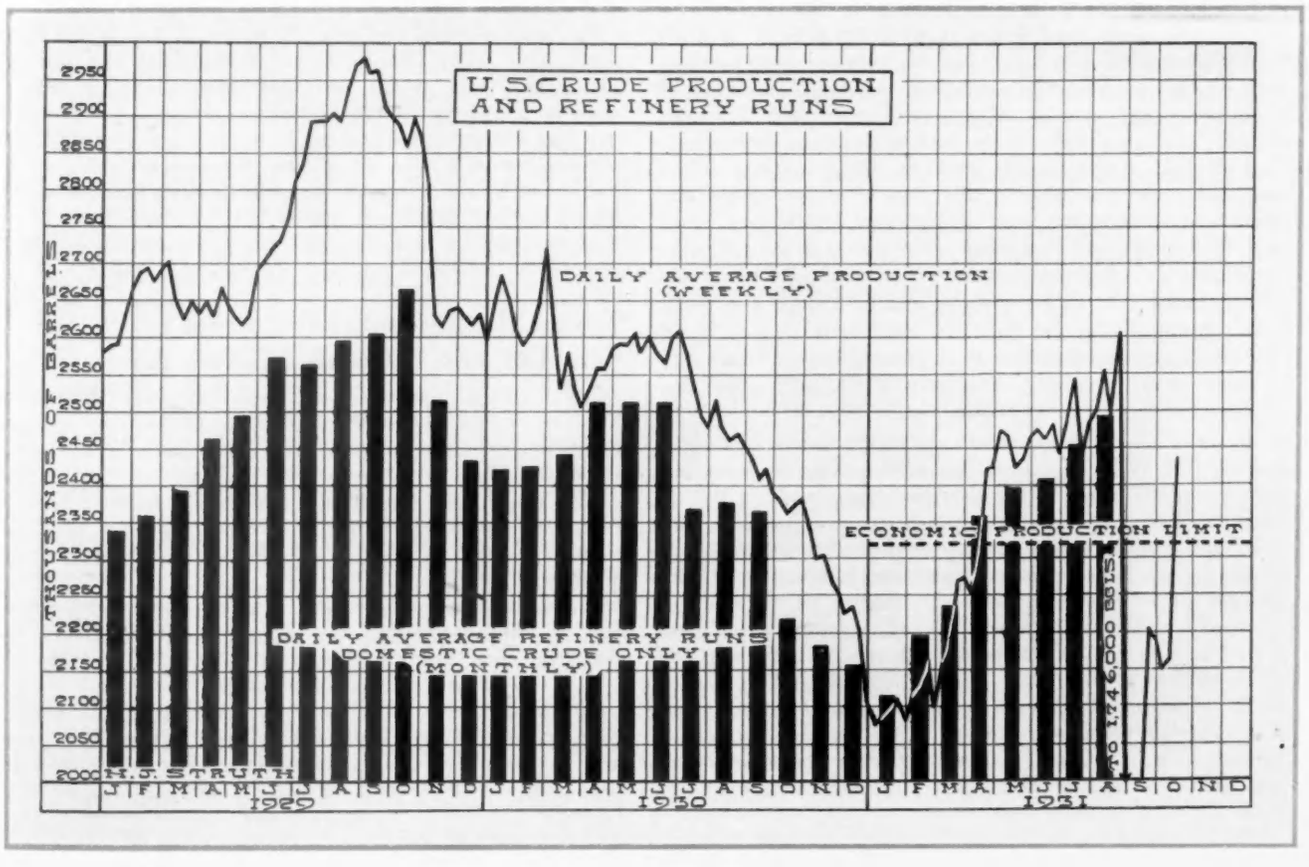
Some agitation for higher crude prices has been heard, but there is some doubt as to the wisdom of such a move. The reaction would be favorable from one standpoint, but might lead to a slightly higher output. If the present level can be held until the first of next year, higher crude prices should be justified.

Railroad Commission Moves To Control Waste of Gas

Austin, Texas.—Each of the several orders of the railroad commission governing the production of oil and gas in Texas which have been issued during the past week has been a move to reduce the enormous gas waste which has been attendant to the production of oil in Texas for the past several years.

The Panhandle order on drilling gas wells requires that an operator shall not have more than three days in which to drill in and complete a well unless a millerhead or other satisfactory equipment is used to prevent the waste of gas during the drilling-in process. Another rule of this order provides that casing in all wells must be set and cemented not more than 25 feet above the point where the first show of gas is encountered in the lime formation. When wells are to be completed as oil wells at a depth below the lime gas, one string of casing must be set and cemented with sufficient cement completely and effectually to seal off the lime gas formations from other formations; and all casing must be cemented by the pump and plug method.

Four rules controlling the completion of wells in East Texas have been promulgated as follows: 1. All oil strings, or flow strings, of casing shall be tested for leaks in the following manner: after the string is cemented and before the cement



MARKET SECTION

plug is drilled the fluid in the casing shall be bailed or swabbed until the top of the fluid is 2500 feet or more below the surface. The well shall be allowed to stand in this condition for 48 hours at the end of which time a measurement shall be taken to the top of the fluid. If it is found that the fluid has not raised more than two feet, the casing shall be adjudged in good condition. If the fluid level has raised more than two feet the well will be allowed to stand 24 hours more, and again measured for fluid level. If no further rise in level is noted the casing will be adjudged in good condition and operations allowed to continue. If the second measurement shows a rise in fluid level, the casing will be condemned and the operator ordered to correct the condition. This may be done either with a new string of casing, or where possible by cementing back the old string to the surface. After the corrective operations, the well will again be tested in the above manner.

2. All surface, or Christmas Tree fittings, shall be tested to a pressure of not less than 800 pounds.

3. All wells shall be equipped with a bradenhead or casinghead with working pressure of not less than 800 pounds.

4. All wells that encounter the top of the pay horizon at minus 3300 feet, or lower shall be allowed a maximum sand penetration of four feet.

The order on the Yates pool calls for an allowable of 65,000 barrels and limits drilling to one well to each 100 acres. Rule four of this order states that "no well shall be drilled more than 225 feet into the lime." Rule seven requires that "within six months from the date hereof all wells must be tubed, using tubing of the size which is standard in said field at this time, or as may be otherwise directed by the commission."

The Winkler County order includes an allowable of 40,000 barrels, and there is no change in the field rules.

The Darst Creek field is limited to 18,000 barrels. It gives the deputy supervisor in charge of the field the right to allow wells which have a high percentage of water, to have a larger production than those in which water is not such a serious hazard. The other wells in the field are to have their allowables reduced to a point that will keep the production of the field within the 18,000-barrel allowable. This order also requires that wells in the new Denman area of the pool which have flush production be gauged again within 90 days of their completion, in order to determine actual potentials for proration purposes.

The production in the Salt Flat field is limited to 10,000 barrels. The same adjustment for serious water conditions may be made in this area as in the Darst Creek field at the discretion of the deputy supervisor.

The allowable for the Van field has been maintained at 50,000 barrels. The method of proration in this field, however, has been drastically changed, the alteration being made at the request of Pure Oil Company, which operates most of this field. The production will be distributed proportionately among all leases on a basis of reservoir content per acre-foot. Under this new plan the surface acreage multiplied by the depth of the sand beneath each lease will be used to determine the number of acre-feet. This will be divided into the total acre feet of oil producing sand in the field to determine the proportion of the 50,000-barrel allowable to be apportioned to each lease. It is expected that this will more truly prorate the production of each lease in the field than any other method now in general use. It should be noted, also, that both the request of Governor Sterling for a reduction for this field and the request of the royalty owners for an increase in the production of this field were denied.

Production in Ector County is limited to 6300 barrels, to be prorated among the 40-acre units of the field.

The Panhandle allowable will be set at 55,000 barrels, a cut of 5000 barrels per day.

All orders carry the notice that the case is kept open on the docket of the railroad commission, and that changes may be made in the rules governing any field as occasion arises .

Panhandle Production Cut To Eliminate Waste of Gas

Austin, Texas.—The expected reduction of the Panhandle allowable from 60,000 to 55,000 barrels per day will result in the saving of about 1250 barrels of casinghead gasoline daily, according to E. V. Foran, technical advisor to the old central proration committee. Mr. Foran has recently made a study of wet gas production in that area, and stated that one barrel of casinghead gasoline is produced with four barrels of oil.

Casinghead gasoline is worth four cents per gallon in this field, or $1.68 per barrel. Oil produced there is selling at 55 cents. At the present time the field is producing 60,000 barrels of oil and enough gas of the wet variety to produce 16,000 barrels of casinghead gasoline. The capacity of Panhandle casinghead gas plants will permit the extraction of only 14,750 barrels of this gasoline, the rest of the wet gas is being blown into the air.

The reduction of 5000 barrels per day which has been recommended to the railroad commission will cut the allowable to a point that will permit all wet gas being passed through the extraction plants. This will result in a daily saving of $2100 in casinghead gasoline alone, plus the value of the residue gas.

It is also planned to force extraction of gas in the East Texas field. Mr. Foran stated that up to the present 1,100,000,000 feet of gas has been blown into the air or burnt in flares in that field during the past six months, and that waste at the present time amounts to 500,000,000 feet each month. He stated that the gas has some gasoline content, and that with the rising price of gasoline, the installation of extraction plants may be expected. This may result in the profitable operation of some leases which have barely paid expenses up to the present time.

Texas Marketers Are to Meet in San Antonio October 22 and 23

San Antonio, Texas.—The Texas Petroleum Marketers Association two-day annual convention in San Antonio was scheduled to open October 22. Convention headquarters are at the Plaza Hotel, where all the sessions will be held.

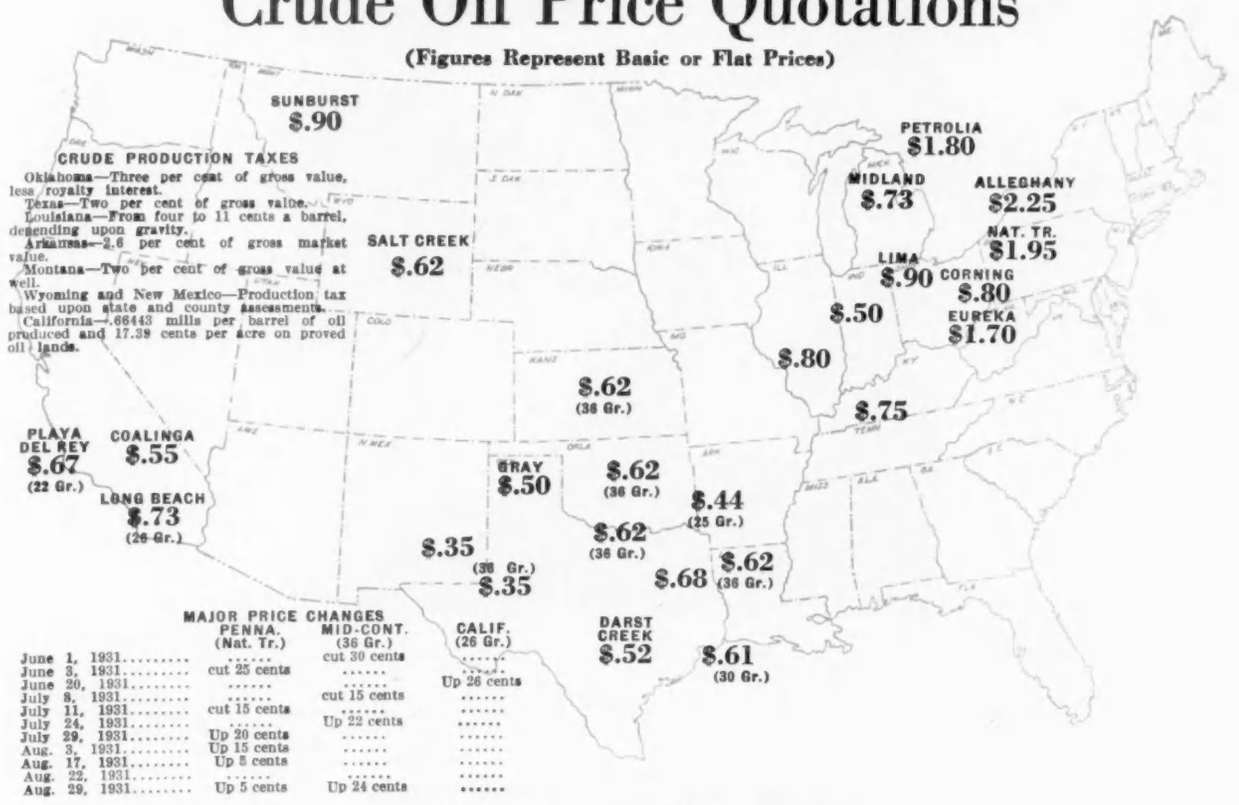
The Texas code committee, appointed by the American Petroleum Institute, is to meet here at the same time and members of the association are invited to attend the code meetings.

W. C. Gaylor, Gaylor Oil Company, Houston, is president of the association and Chester A. Slimp, Slimp Oil Company, San Antonio, is secretary.

Loveland, Colo.—This town gets its water supply mainly from artesian wells which have recently presented a problem because they have stopped producing water and are producing oil along with enough natural gas to cause it to flow.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices)



CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.
Texas—Two per cent of gross value.
Louisiana—From four to 11 cents a barrel, depending upon gravity.
Arkansas—2.6 per cent of gross market value.
Montana—Two per cent of gross value at well.
Wyoming and New Mexico—Production tax based upon state and county assessments.
California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

MAJOR PRICE CHANGES

	PENNA. (Nat. Tr.)	MID-CONT. (36 Gr.)	CALIF. (26 Gr.)
June 1, 1931.....	.....	cut 30 cents	.....
June 3, 1931.....	cut 25 cents	.....	.....
June 20, 1931.....	.....	.....	Up 26 cents
July 8, 1931.....	.....	cut 15 cents	.....
July 11, 1931.....	cut 15 cents	.....	.....
July 24, 1931.....	.....	Up 22 cents	.....
July 29, 1931.....	Up 20 cents	.....	.....
Aug. 3, 1931.....	Up 15 cents	.....	.....
Aug. 17, 1931.....	Up 5 cents	.....	.....
Aug. 22, 1931.....	.....	.....	.....
Aug. 29, 1931.....	Up 5 cents	Up 24 cents	.....

Official Postings and Differentials

(Revised to October 20, 1931)

California: (Effective June 19, 1931.

Signal Hill, Seal Beach and Alamitos Heights: 14 to 22.9 gravity 65 cents; 23 gravity, 67 cents with differential of two cents for each degree upward. Top price for Signal Hill, 30 gravity, 81 cents; top price Seal Beach and Alamitos Heights, 27 gravity, 75 cents.

Huntington Beach: 14 to 21 gravity, 65 cents; 22 gravity, 66 cents with differential of two cents for each degree upward. Top price, 27 gravity, 76 cents.

Inglewood: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity 76 cents.

Playa Del Rey: 19 to 20.9 gravity 65 cents with differential of one cent for each degree upward. Top price, 25 gravity, 70 cents.

Olinda and Brea Canyon: 14 to 19.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents; 22 gravity 68 cents with differential of two cents for each degree upward. Top price, 28 gravity, 80 cents.

Coyote Hills: 14 to 22.9 gravity 65 cents; 20 gravity 66 cents; 21 gravity 67 cents with differential of two cents for each degree upward. Top price, 28 gravity, 79 cents.

Santa Fe Springs: 24 to 26.9 gravity 65 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 73 cents; 30 gravity 75 cents; 31 gravity 78 cents; 32 gravity 80 cents; 33 gravity 83 cents; 34 gravity 85 cents; 35 gravity and above 87 cents.

Whittier, La Habra and Montebello: 65 cents a barrel.

Torrance: 14 to 21.9 gravity 65 cents with differential of one cent for each degree to 25 gravity and two-cent differential for 25 gravity. Top price, 25 gravity, 70 cents.

Richfield: 14 to 20.9 gravity 65 cents; 21 gravity 66 cents with differential of two cents for each degree upward. Top price, 25 gravity, 74 cents.

Elwood: 33 gravity 79 cents; 34 gravity 81 cents with differential of three cents for each degree upward. Top price, 36 gravity, 87 cents.

Newhall, McKittrick and Kern River: 55 cents a barrel.

Midway-Sunset, Elk Hills and Buena Vista Hills: 14 to 21.9 gravity 55 cents; 22 gravity 56 cents; 23 gravity 58 cents; 24 gravity 61 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 68 cents; 28 gravity 71 cents; 29 gravity 74 cents; 30 gravity 76 cents.

Los Hills: 14 to 20.9 gravity 55 cents; 21 gravity 57 cents; 22 gravity 59 cents; 23 gravity 60 cents; 24 gravity 62 cents; 25 gravity 64 cents; 26 gravity 66 cents; 27 gravity 67 cents; 28 gravity 69 cents; 29 gravity 71 cents; 30 gravity 72 cents.

Coalinga: 14 to 24.9 gravity 55 cents; 25 gravity 57 cents.

Wheeler Ridge: 55 cents a barrel.

Athens, Dominguez and Rosecrans: 24 to 24.9 gravity 69 cents with differential of two cents for each degree upward. Top price, 34 gravity, 89 cents a barrel.

Oklahoma, Kansas, North Texas (Effective Aug. 22, 1931).

Flat Prices.

Oklahoma: Cushing, Yale, Oklahoma City, Morrison, Wewoka and Seminole: 68 cents. **Cement, Duncan, Walters:** 60 cents; **Healdton:** 37 cents; **Hewitt and Graham:** 52 cents.

North and Central Texas: Burkburnett, Archer, Stephens, Henrietta, Electra, Comanche and Olden: 68 cents; **East Texas:** 68 cents.

Gravity Scale Prices: Below 28 gravity 44 cents a barrel with differential of 2 cents for each degree beginning with 28 and ending with 40 gravity and above. Top price 70 cents a barrel.

Texas Panhandle: (Effective Aug. 22, 1931).

Gray County: Below 35 gravity, 46 cents with differential of 2 cents for each degree beginning with 35 and ending with 40 gravity and above. Top price 58 cents a barrel.

Carson and Hutchinson Counties: Below 35 gravity, 41 cents with differential of 2 cents for each degree beginning with 35 and ending with 40 and above. Top price 53 cents a barrel.

West Texas: (Effective Aug. 22, 1931.)

Crane, Upton, Crockett, Ector, Howard, Glasscock, Pecos and Winkler Counties, Texas, and Lea County, New Mexico, 35 cents flat.

Southwest Texas: (Effective Aug. 22, 1931.)

Refugio heavy oil 60 cents a barrel.

Refugio light oil—same as Gulf Coast (see below).

Gulf Coast: (Effective Aug. 22, 1931.)

Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble and Refugio Light: Below 25 gravity 55 cents, with differential of 1 cent for each degree beginning with 25 gravity and ending with 35 and above. Top price, 66 cents a barrel.

Mirando: 60 cents; **Salt Flat,** 52 cents; **Darst Creek,** 52 cents; **Pettus:** 70 cents; **Markham:** 52 cents.

East Texas: (Effective Sept. 2) flat price, 68 cents.

North Louisiana and Arkansas: (Effective Aug. 22, 1931.)

Caddo, Homer, Haynesville, Bull Bayou, Sabine, Cricton, DeSoto, El Dorado, Cotton Valley, Sarepta, Cartersville: Below 29 gravity 44 cents with differential of 1 cent for each degree beginning with 29 gravity and ending with 40 and above. Top price 70 cents a barrel.

Smackover: 52 cents.

Rocky Mountain States: (Effective Aug. 22, 1931).

Salt Creek: Below 29 gravity 46 cents; 38 gravity and above 66 cents.

Elk Basin and Grass Creek: 90 cents; **Big Muddy:** 68 cents; **Lance Creek:** 105 cents; **Rock Creek:** 70 cents; **Sunburst:** 90 cents; **Osage:** 98 cents; **Cat Creek:** 65 cents; **Pondera:** 70 cents; **Hogback, New Mexico:** 72 cents.

Eastern States: (Effective Aug. 24, 1931).

Lima: 90 cents; **Indiana:** 50 cents; **Illinois:** 80 cents; **Princeton:** 80 cents; **Wooster:** $1.00; **Western Kentucky:** 75 cents.

Pennsylvania: (Effective Sept. 16, 1931). **Bradford District:** $2.25; **National Transit oil:** $1.95; **Southwest Pennsylvania Pipe Line oil:** $1.80; **Eureka Pipe Line oil:** $1.70; **Buckeye Pipe Line oil:** $1.60; **Corning crude:** 80 cents.

Michigan: (Effective Aug. 22, 1931). **Midland:** 73 cents a barrel. **Muskegon:** Same posting as Mid-Continent; 44 cents to 70 cents a barrel.

Canada: (Effective Aug. 24, 1931)..

Petrolia: $1.80; **Oil Springs:** $1.87.

A TOAST *to the* SWITCH *and the* VALVE

WHEN all the statisticians meet in convention assembled and total up the last indice of Southwestern progress, the chances are that the resolution committee will have a good word to say for the part that oil and electricity have played in amassing the astounding totals.

The oil industry has given impetus to some of our foremost cities, has enriched our schools and public institutions, has given employment to hundreds of thousands of people and brought new wealth to the vast lands of the Southwest. The electrical industry has brought power to thousands of new industries, provided dependable transportation in our cities and eased the burdens of men, women and children in every county throughout the whole Southwest.

In the Gulf Coast country we find electricity working in the oil fields to provide instant power for the drilling of wells, lighting of derricks, pipe lines and assisting in many ways to increase production and lessen the cost of producing oil. The hand that knows the feel of a throbbing valve is also familiar with the power that is back of the electrical switch.

Engineers of this company are familiar with the power problems of the petroleum industry. Consult them freely on the use of electric Power.

GULF STATES
UTILITIES COMPANY

General Offices

BEAUMONT, TEXAS LAKE CHARLES, LA.

Ancient Coral Reefs and Oil Fields

(*Continued from page* 18)

liant, living colors, cling to the coral framework. In and out of the recesses of the corals and sea weed dart small, tropical fish of astounding shapes and colorations, some flat, some perfect globes, some with fantastic spines and trailing fins, some transparent, some banded or speckled with every tint of the rainbow. Around the margin of the ledges cruise sharks, hunting smaller fish. No land jungle offers the variety of life or the splendor which many coral associations exhibit.

Coral reefs are not universally distributed in the oceans. They are restricted to tropical waters, and, taken from a world wide viewpoint, are best developed on the eastern shores of the continents, for example, on the eastern coasts of Central America, Australia, and Africa. The specific conditions demanded for extensive coral growth and the formation of reefs are as follows:—

(1.) The water must be salt and clear and free from mud brought into the ocean from the land. Thus, coral reefs do not occur in the muddy, semi-fresh water opposite the mouths of large rivers.

(2.) The water must be warm, having an average temperature of around 65 or 70°F.

(3.) The water must be shallow. For reef building the depth of the oceanic water should be between 25 and 40 fathoms (150 to 240 feet).

As with all the phenomena of nature and geology, there is a perpetual dovetailing and interweaving of reef types. However, three major varieties of coral reefs may be distinguished.

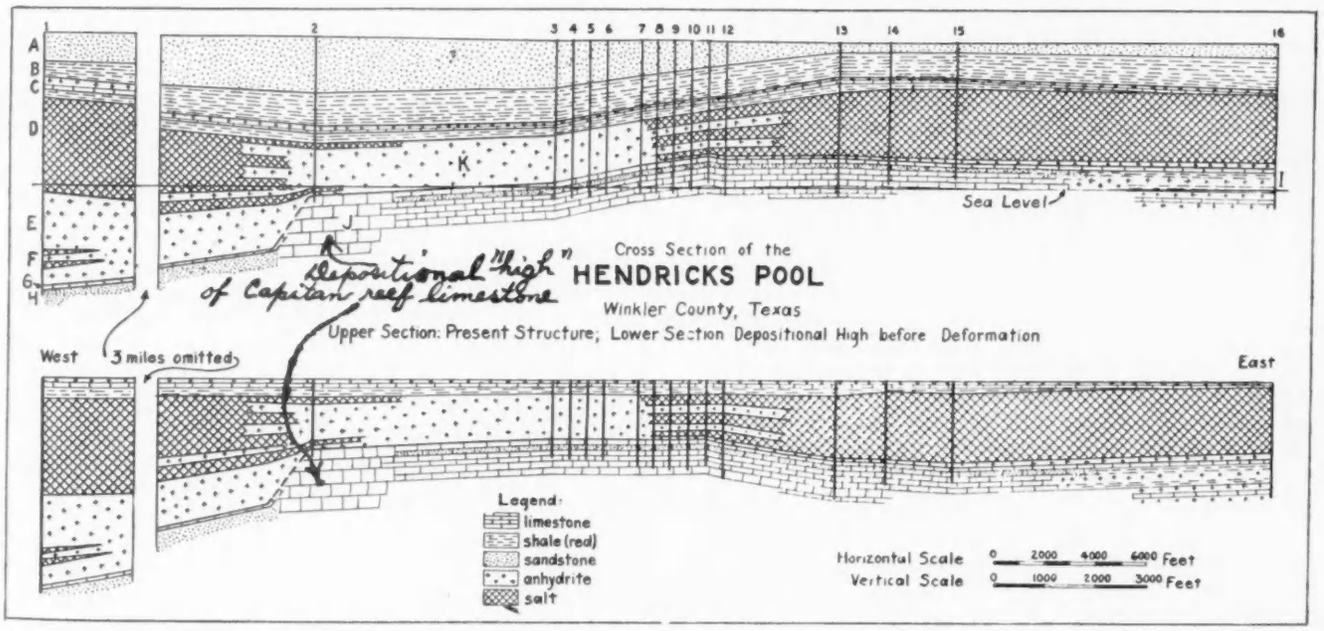
(1.) "Fringing reefs." Such reefs, as their name implies, "fringe" the land. A mass of coral is built up in the shallow water along a coast, with the highest and growing part of the agregation forming a pronounced reef some distance from the shore. The seaward edge of the coral growth is highest because it is there that the waves strike, and the coral polyps derive more oxygen and grow most sturdily in the tumult of the dashing water.

(2.) "Atolls." These are the circular reefs of the South Sea Islands. Atolls are among the most remarkable geological features known.

The reef is a round island, enclosing an interior lagoon, with usually a channel by which ships may enter. The ring-shaped island is very narrow and low. It often supports a grove of cocoanut palms and other vegetation and is sometimes inhabited. When tropical hurricanes sweep over inhabited atolls a great catastrophe occurs. One of Jack London's most vivid tales describes the destruction by a furious typhoon of the people dwelling on an atoll.

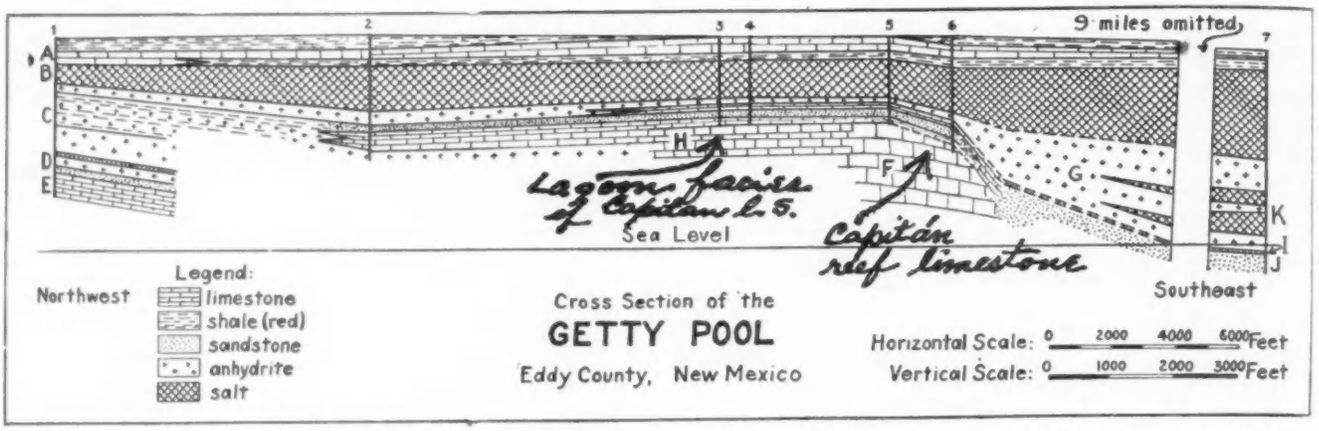
(3.) "Barrier Reefs." It is this type of coral reef with which the present article is concerned. Barrier reefs are situated some distance from the land. Between the reef and the shore is a lagoon of shallow water. The width of the lagoon may be from less than a mile to more than 30 miles. Barrier reefs are often of great length, but are not usually continuous, being interrupted by numerous entrances into the lagoon, and by scattered coral islands. In Oceanica, the west coast of the large island of New Caledonia is guarded by a reef 400 miles long. However, the greatest of all barrier reefs is that on the eastern shore of the continent of Australia.

The Great Barrier Reef of Australia is 1200 miles in length. Between it and the mainland of the state of Queensland is a lagoon from 20 to 80 miles wide. Sailors call this lagoon the "Grand Canal." This astounding coral reef is one of the geographical miracles of the world. A most interesting account of the Great Barrier Reef, illustrated with splendid photographs, may be found in the National Geographic Magazine for September, 1930, "The Great Barrier Reef and Its Isles—the Wonder and Mystery of



Cross sections of the Hendricks pool, showing a "high" due to a combination of deposition and deformation. The upper section represents the present structure; the lower represents the structure as it was before the formation of the syncline west of the pool. This was reconstructed by assuming that the Rustler dolomite was laid down horizontally. It is probable that there was a slight compaction fold in the salt and Rustler formed during and shortly after deposition. This would accentuate the depositional "high." A, Triassic and Recent sandstone and shale. B, Permian Red-beds. C, Rustler series. D, Main salt series.. E, Castile gypsum. F, White salt in the Castile. G, Upper dark limestone of the Delaware Mountain formation. H, Delaware Mountain sandstone. I, Anhydrite series east of the "high." J, Depositional "high" of the Capitan reef limestone. K, Anhydrite replacing salt over depositional "high." Wells shown: 1, Skelly, Leeman No 1; 2, Humble, Hendricks No. 1; 3, to 12, wells in the Hendricks pool; 13 and 14, Independent, McCabe No. 1 and No. 3; 15, Amerada, Walton No. 1; 16, Bolin, Brown and Altman No. 1

From "Structural Development and Oil Accumulation in Texas Permian," by Robin Willis, Bulletin of American Association of Petroleum Geologists, August, 1929



Cross section of the Getty pool, Eddy County, New Mexico, a typical depositional "high" overlain by a compaction fold. A, Rustler dolomite. B, Main salt series. C, Seven Rivers gypsum and red shale. D, Queen sand series in the lower Seven Rivers. E, San Andres limestone. F, Depositional "high" of the Capitan reef limestone. G, Castile gypsum. H, Carlsbad limestone, lagoonal facies of the Capitan. I, Upper dark limestone of the Delaware Mountain formation. J, Delaware Mountain sandstone. K, White salt in the Castile gypsum. Wells shown: 1, Marland-Hogan, Johnson 1; 2, Cook Ironsides, Dooley 1; 3, Getty, Dooley 1; 4, Getty, Hinckle 1; 5, Getty, Nicholas 1; 6, Snowden-McSweeney, Lawrence 1; 7, Marland, Workman 1

From "Structural Development and Oil Accumulation in Texas Permian," by Robin Willis, Bulletin of American Association of Petroleum Geologists, August, 1929

Australia's World-Famous Geographical Feature," by Charles Barrett.

The first white man to see the Great Barrier Reef was the Spanish sea Captain, Don Luis de Torres, who, in 1605, passed through the straits between Australia and New Guinea. For over 150 years afterward the great reef was unvisited by white sailors. Then the noted English maritime explorer, Captain Cook, rediscovered it about 1770. In his "Voyages," Captain Cook first described the Great Barrier Reef:—

"A reef such as one speaks of here in scarcely known in Europe. It is a wall of Coral rock rising almost perpendicularly out of the unfathomable ocean, always overflown at high water, generally seven or eight feet, and dry in places at low water. The large waves of the vast ocean meeting with so sudden a resistance make a most terrible surf breaking mountains high . . ."

The earliest scientific investigation of the reef began about 1845. The geologist of the expedition was J. B. Jukes. His general description of the reef is worthy of quotation:—

"The great barrier reefs are thus found to form a long submarine buttress, or 'curtain,' along the northeastern coast of Australia, rising in general precipitously from a very great depth, but resting toward the north on the shoaler ground of Torres Strait, and towards the south on the bank stretching off from Sandy Cape. If it were to be laid dry, this great barrier would be found to have a considerable resemblance to a gigantic and irregular fortification, a steep glacis crowned with a broken parapet wall, and carried from one rising ground to another. The towerlike bastions, of projecting and detached reefs, would increase this resemblance."

The geological age of the Great Barrier reef, that is, the geologic period in which the coral building was initiated, is in doubt. Different ages have been assigned, ranging through Cretaceous and Tertiary times. However, various diamond-drill holes have been sunk to ascertain the thickness of the coral mass. One of these was drilled by Great Barrier Reef Company on a coral sand cay on Michaelmass Reef, near the port of Cairns, Queensland, and approximately half way between the north and south ends of the reef. This test indicates that the coral accumulation is of youthful eologic age, perhaps Pleistocene, for only 430 feet of coral material was penetrated. It appears that not sufficient geological time has elapsed even for the coral to be cemented into hard, firm rock. Mr. Charles Barrett, in his account of the Great Barrier Reef in the National Geographic Magazine, mentioned in preceding paragraphs, describes this drilling as follows:—

"The depth reached was 600 feet. Beginning with 'coral dune' sand of the beach, passing through solid coral (porites) from 12 feet to 19 feet, and various other formations, the bore ended in gray-green calcareous, glauconitic ooze. Coralline material, except for a few feet of solid coral was loosely coherent and extended to a depth of nearly 430 feet. Beneath this, the report records (apart from a little coral sand), to the depth of 600 feet, there were only rounded quartz sand with abundant foraminifera and shell fragments and much of the glauconitic material."

Origin of Barrier Reefs

The origin of fringing reefs is evident. They simply grow out from the shore. However, the origin of atolls and barrier reefs is a subject which has aroused much thought and controversy. Both barrier reefs and atolls have steep oceanward slopes, falling off abruptly into the oceanic depths for sometimes thousands of feet. Within the ring of the atoll and in the lagoon behind the barrier reef the water is aften 300 feet deep. Here, then, is a real problem—the explanation of these unusual features.

Charles Darwin, the great scientist of evolution and a deep thinker in many other fields of inquiry, many years ago put forth the theory that atolls and barrier reefs were due to a gradual sinking of the land. The land was supposed to have subsided slowly and steadily, so that the corals could keep on building upward at the level of the transgressing ocean for long geologic periods. In the case of isolated atolls in the open sea, a mountain peak, perhaps a great volcanic cone, was thought to have gradually gone under the water, a circular coral growth around its sides finally forming the present day ring-shaped atolls. The pioneer American geologist Dana supported the views of Darwin and worked them out in greater detail.

Later, Agassiz and Murray proposed theories for coral reefs without assuming subsidence. More recently, Daly has put forth the idea of a rise of water level as the primary geologic factor in the origin of coral reefs. This is a re-

versal of Darwin's theory, it would appear at first thought. On the contrary, as far as the conditions of coral growth are concerned, it is, in effect, the same thing. A gradual rise of the ocean upon the land for long periods of time would allow coral reefs to grow continuously at tide-level just as efficiently as a subsidence of the land into the sea. However, a rise of the ocean would produce a different coastal geography than a sinking of the land.

Present day thought favors the original theory of Darwin, that of land subsidence. Nevertheless, it is evident that the problem of the origin of barrier reefs and atolls is a very complex one into which enter many factors. The fundamental thing in the formation of large reefs is, without doubt, the maintenance for long periods of time of conditions such that corals may grow persistently at tide level, building up the coral rock framework of the reefs. In one locality this may be brought about by sinking of the land; in another locality, by rising of the sea. In the formation of barrier reefs, a pre-existing base upon which the corals could start growth, perhaps a sandbar, perhaps a structural or anticlinal ridge, may often have been the agent which determined the location of a reef.

An example will be taken from present day geographical and geological conditions to show how, with geologic time, a great barrier reef could form on the coast of Texas. From the vicinity of Aransas Pass and Corpus Christi, St. Josephs Island, Mustang Island, and the long reach of Padre Island form a line of sand dune islands, extending to Point Isabel and the mouth of the Rio Grande at the Mexican border. Between these islands and the mainland are bays and lagoons.

Within very recent geological days, this coast has experienced uplift, as demonstrated by raised shell beaches around Nueces Bay at Corpus Christi.[1] Let us suppose that Nature should reverse geologic movements, and that the Texas Gulf Coast of the Corpus Christi area should start sinking gradually, accompanied by a change to a tropical climate and favorable water conditions for corals. As the sand dunes of Padre Island went under the waves, corals would start building upon them at tide level. At the same time, the present narrow lagoon behind Padre Island would be widened by the invasion of the ocean. If this sinking kept up for a long geologic period, there would be in future ages a barrier reef of coral defending the Texas coast for 200 miles or more.

Fossil Coral Reefs

For many decades the existance of fossil coral reefs, that is to say, reefs buried in the sediments of past geologic ages, has been known to geologists. In Ordovician time corals built reefs in New York and Tennessee and in Alaska and northern Canada. Other Paleozoic periods furnish examples of fossil reefs.

The Niagaran series of rocks of the Silurian epoch contains reef limestones, especially in Indiana, Wisconsin, and adjacent states. In the Devonian period a coral reef was built near the present site of Louisville, Kentucky. The Louisville reef is one of the best known of fossil reefs. It displays numerous species of corals, some of the cup corals being of exceptional size.

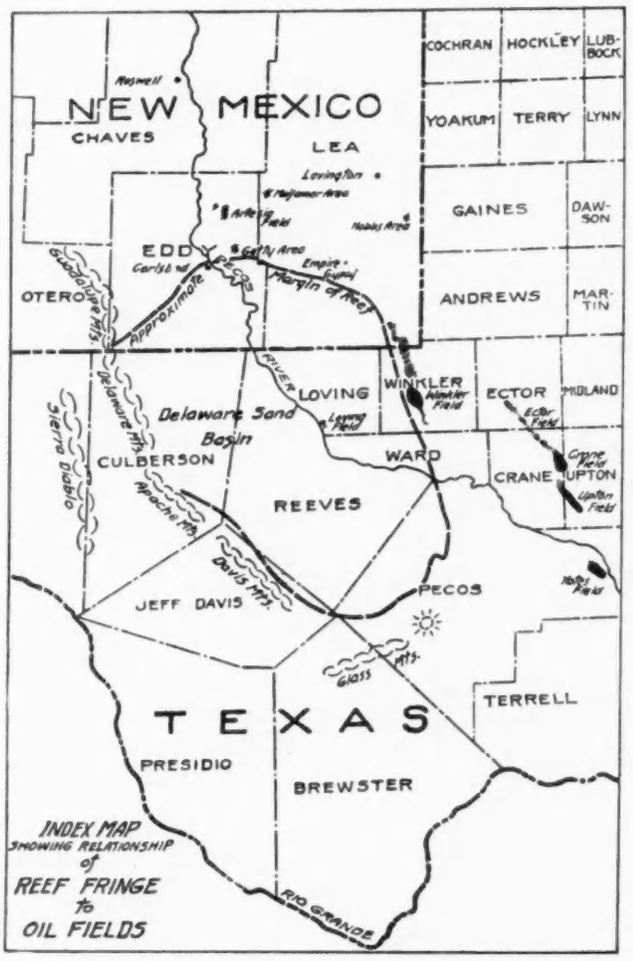
The foregoing fossil reefs are all in the great Paleozoic system. In the succeeding Mesozoic era, reef limestones again occur. In the Upper Triassic, reefs were made along the California-Alaska coast. In Mesozoic days a great ocean, called by geologists "Tethys," extended from Spain and France eastward across Asia to the East Indies. The Mediterranean Sea is the modern remnant of this ocean. Corals, identical with present day reef-building corals, during the Upper Triassic formed limestones as much as 4000 feet thick in this ancient "Tethys" ocean.

Coral reefs are found in Jurassic rocks also. A singular instance exists at Solenhofen, Germany. Here is a fossil atoll. The ring of this fossil atoll consists of heavy reef dolomite and limestone. Within the circle is smooth, fine-grained lithographic limestone, the rock which is used every- In the Cretaceous deposits of Mexico and Texas reef-building shells are found, especially a coral-like bivalve, called the "rudistid."

References West Texas Reefs

The occurence of fosil coral reefs in the oil producing where in making the colored prints known as lithographs. Permian Basin of West Texas and Southeast New Mexico was not recognized, however, until within the last three or four years.

(To Be Continued)



Map showing Capitan Reef System of Permian Basin and its relation to various oil fields. From "Permian Stratigraphy and Structure of Parts of Southeastern New Mexico and Southwestern Texas," by W. Grant Blanchard, Jr. and Morgan J. Davis, Bulletin of American Association of Petroleum Geologists, August, 1929

[1] "Evidence for Recent Uplift on Gulf-Shell Deposits on High Sea Cliffs and Gas Fields near Corpus Christi, Texas, considered Remarkable Coincidence", by Richard A. Jones, Oil and Gas Journal, April 5, 1928.

Majority in East Texas Favors Curtailment Program

(*Continued from page* 13)

Production in East Texas is now held by too many companies and operators for all to obtain pipe line connections and any appreciable market relief in the event proration is removed from the area on production. The number of separate proporty owners is increasing daily, including many that can not finance storage or private market outlet. A return of wide open production in this field is now definitely postponed until the flush yield of oil is on the wane. Recognition of this has been given lately by many who originally favored a policy of allowing it to flow open and deplete the flowing life of the Woodbine sand in short order. Local refineries and crude marketing concerns with established gathering lines and tank car racks still have some hopes of conditions changing in the field so that they can again purchase oil at buyers' prices, and resume operations on a capacity schedule. Proration and a Mid-Continent price scale have served to eliminate independent crude brokers, but some of the refiners are managing to continue operations during the current off season for gasoline. Ample crude is available for these plants at the posted price, but due to poor plant efficiency in some instances and low prices on refined oils, little profit is obtainable.

During the flurry which was created early last week when a federal court injunction threatened to disrupt the conservation program in East Texas, and following that excitement, the spectacular field has been continuously held within direct control of Governor Ross S. Sterling. When he learned of the injunction he expressed conviction that only the president or the Supreme Court of the United States could interfere with the martial law regime under which the field was controlled, and he immediately issued formal orders to Brigadier General Jacob F. Wolters, commander of state troops in East Texas, to continue enforcing the restricted production program, including its application to the wells of the company which had armed itself with the federal injunction.

Commission Relieved

In connection with that order Governor Sterling severed the state railroad commission from the martial law rule so that the commission and its employees would not be in contempt of the federal court, and in place of the railroad commission's order limiting East Texas wells to 165 barrels daily production each, he substituted a military order, as governor of Texas and commander-in-chief of the military forces of the state, restricting the wells to the 165-barrel per day allowance. The new order, therefore, placed the East Texas field largely upon the same basis as during the August 17-September 4 complete shut-down period, except that production of 165 barrels per day from each well was provided, as against no production at all under the earlier policy.

The intervention of the governor came after United States Judge Randolph Bryant of the Eastern District of Texas had issued a court order at Tyler late October 13, retsrain the railroad commission and its agents and the military forces from interfering with the operation of five wells of Brock-Lee Oil Company, a Delaware corporation, which also owns a refinery at Overton, Texas. The company did not attempt to enjoin the governor.

The court ordered the wells of the plaintiff company to be left immune to the conservation program and unmolested by the state enforcement officers at least until October 29, 1931, when the test case is scheduled to be tried before three United States Judges at Beaumont, Texas, one of whom will be Circuit Judge Joseph C. Hutcheson, and another of whom might be himself. Sought out by newspaper men, Judge Bryant declined to comment at length upon Governor Sterling's action, merely stating that it was a judicial matter to be settled before the court at Beaumont.

Governor Commended

Many telegrams were sent to Governor Sterling at Austin immediately after he had counteracted the federal injunction with his revised military command, and it was stated that a predominantly large percentage of the messages upheld the governor in his stand and expressed agreement that the administration of the East Texas conservation program was a state's affair in which federal courts had no right to interfere.

Defendants named in the federal suit were C. V. Terrell, Pat M. Neff, and Lon A. Smith, the three members of the railroad commission; A. B. Capers, representing the commission as field supervisor of the conservation program in East Texas; James Allred, attorney general of Texas; General Jacob F. Wolters, commander of the military forces; and V. McDavid, county attorney of Rusk County.

In the petition to the court the plaintiff charged that powers of the state railroad commission violate the federal constitution, which prohibits a state from passing an act impairing the obligation of contracts, and it was pointed out that the Fourteenth Amendment prohibits a state from passing a law depriving persons of liberty and property without due process of law. The plaintiff charged that house bill No. 25 passed by the Forty-Second Legislature is unconstitutional by virtue of being uncertain, indefinite and ambiguous, and that the system of proration of oil on basis of its ratio to gas is unsound because few wells have an equal ratio. The plaintiff charged it had been irreparably damaged to extent of over $1,000 per day by the proration orders of the railroad commission.

Order Authorizes 5000 Barrels

Judge Bryant in allowing the petition and issuing the restraining order stated that he saw in the plaintiff's case just cause for enjoining the defendants and ordering a hearing in equity of the case. The court granted operation of the five wells immune from interference to the extent of 5000 barrels daily each, stating he saw in the complaint reason to believe the plaintiff would suffer irreparable damage. Officials of Brock-Lee Oil Company said in their petition that they had ready market for all oil their wells are capable of producing, and they proposed to pipe the 25,000 barrels daily the court allowed to a refinery at Overton.

Brigadier General Wolters moved swiftly October 14, to carry out the orders of Governor Sterling, closing four wells of the mentioned company which were found in operation after granting of the federal injunction.

▼ ▼ THE WEEK'S NEWS ▼ ▼

New Company Filed Suit on Texas Conservation Law

Tyler, Texas.—Three independent companies with producing properties in the Joiner and Kilgore sections of the East Texas field are credited with having assigned leases and wells to Brock-Lee Oil Company, which was used to challenge martial law and proration enforcement by the state by obtaining a temporary injunction in federal court here October 13. Brock-Lee Oil Company is a Delaware corporation, and obtained permit to operate in Texas about September 3, 1931. The officers of the company are: T. B. "Tommy" Cochran of Wichita Falls and Tyler, president; J. G. Bass, vice-president; and C. F. Johnson, secretary-treasurer.

Golding-Murchison Oil Company, Dallas, is credited with having assigned its Brock lease, Robert W. Smith Survey, with one producer, and its A. B. Blackwell 80-acre lease, Joiner area, with two completed wells to the above concern. Wade-Reynolds Syndicate, Dallas, is reported to have assigned its W. P. Brett 10-acre lease and one producer, and Overton Refining Company (John Wrather interests) of Overton and Oklahoma City, contributed its L. L. Jones lease and one flowing well.

All of the companies that contributed properties in the formation of Brock-Lee Oil Company are incorporated under the laws of Texas, and for that reason none could make a test case in federal court for lack of jurisdiction. However, Brock-Lee Oil Company served such a purpose.

Officers of Brock-Lee Oil Company lost no time in opening their wells immediately after obtaining the temporary injunction, and had built up an "overage" when military authorities took possession of the properties, which have had to remain shut in until the excess production of each well is "paid back" at rate of 165 barrels daily.

Two refineries at Overton owned by Constantine Refining Company and Overton Refining Company (Wrather interests) were scheduled to utilize a portion of the 5000-barrel daily allowance per well authorized by the court injunction to Brock-Lee Oil Company, while the remainder of the output would have been handled by Tyler Pipe Line Company, which connects with Taylor Refining Company's 15,000-barrel refinery at Tyler. The surplus oil would have been marketed in tank cars over rack operated by Tyler Pipe Line Company at Tyler.

Washington, D. C.—The United States Supreme Court ruled, October 19, that it had "probable jurisdiction" to review the decision of the Federal Court for the Western District of Oklahoma, denying the application of Champlin Refining Company for an injunction against enforcement of the Oklahoma oil curtailment act.

The curtailment act, passed in 1915, it is set forth in the company's petition, prohibited the taking of oil in Oklahoma "at a time when there is not a market demand therefor at the well at a price equivalent to the actual value," and to that extent undertakes to authorize the Oklahoma Corporation Commission to fix the price of crude oil produced in the state in violation of the fourteenth amendment to the constitution.

The Supreme Court denied a petition of Marblehead Land Company and Standard Oil Company of California for a review of a circuit court decision affirming the authority of the city of Los Angeles to enforce an ordinance alleged to prohibit oil drilling upon certain land within the city with the use of power other than animal power, except one electric motor not in excess of five horsepower.

Sinclair-Prairie Merger Plans About Consummated

Tulsa.—Merger of Sinclair Consolidated Oil Corporation and Prairie Oil & Gas Company and Prairie Pipe Line Company has now been accepted as certain following an announcement by W. S. Fitzpatrick, chairman of the board of Prairie Oil & Gas Company in New York last week. His statement was the first ever made to the effect that the merger is being consummated.

He said that Tide Water Associated Oil Company is out of the negotiations, while Sinclair-Prairie negotiations are hopeful of consummation.

The statement reads:

"There has been so much discussion about the consolidation of Sinclair Consolidated Oil Corporation, Prairie Oil & Gas Company and Prairie Pipe Line Company and Tide Water Associated Oil Company that it is due the stockholders of Prairie Oil & Gas Company that the public be advised that an agreement between Tide Water and the other companies is at the present time too difficult and too remote to warrant further discussion and delay.

"We are, however, hopeful of consummating in the near future satisfactory arrangements for the consolidation of the two Prairie companies and Sinclair."

Tulsa.—The Mid-Continent Oil & Gas Association voted to oppose the initiative program of Governor William H. Murray at the annual meeting here Tuesday, October 20. The Murray program deals largely with matters of taxation, which speakers said should be opposed by the petroleum industry.

Twenty-two new directors were added to the list. These, with hold-over directors, will set up the organization of opposition to the initiative program.

The annual banquet was held Tuesday night.

Standard Plans Line From Kettleman to Estero Bay

San Francisco.—Standard Oil Company of California will immediately start construction on an additional pipe line from Kettleman Hills to the company's marine terminal on Estero Bay, a distance of about 70 miles. This action was taken to avoid the necessity of laying off several hundred men. More than 250 men will be employed during the winter months. Worwmen will operate on a four-day per week basis. The line is being built at this time to utilize the manpower within the organization. An eight-inch welded line will be built the entire distance. Material has been placed on the ground and ditching machines are already in action. The work will require about four months for completion.

Casper, Wyo.—Standard Oil Company (Indiana) has announced its intention of immediately installing a new 6500-barrel cracking unit at its Casper refineries. The new plant will replace equipment which has become obsolete. Contract for the construction is let to M. W. Kellogg Company, and all labor is to be hired locally with old company men now laid off to be given preference over all. It will require about nine months to complete the work.

Texas Independents Endorse Fight For Tariff on Crude Petroleum

TYLER, Texas.—Efforts of Wirt Franklin and his followers to have a protective tariff placed on foreign oil received added strength here October 19, when nearly 300 Texas independent operators pledged themselves to support the fight to the end. This, the semi-annual meeting of the Independent Petroleum Association of Texas, was for the sole purpose of discussing a single subject—tariff—and those who took active part in the program minced no words in presenting the cause.

The history of the long-drawn-out battle for protection of the independent operator was unfolded from the initial efforts in 1921 through the latest defeat of the cause in 1930. There was nothing short in the praise received by the president of the Independent Petroleum Association of America, who came from his Oklahoma City home to muster new blood in his tariff drive, which is to be renewed with the convening of congress in Washington the first Monday in December.

President Franklin of the association can find no other reason for present low oil prices than the absence of a tariff that would prohibit cheaply produced South American and other foreign crudes from being shipped into this country in competition to domestic production.

"Until we get a tariff on foreign oil we will never get a fair price for oil," Franklin told the Texas operators.

As an example of the present low prices he cited $1.60 as the average price per barrel of crude for the period of 10 years, ending December 31, 1930; whereas the average price per barrel for the first seven months of 1931 was 60 cents.

Franklin flayed the popular expression of over-production so often heard in this day.

"There is no over-production of crude oil in the United States now, nor has there been for 12 years. Only two years, 1923 and 1927, has the nation produced more oil than we have used. During the above mentioned period we have imported 1,012,000,000 barrels while we actually lacked 650,000,000 barrels of producing the amount we consumed.

"The condition is one of over-supply rather than over-production, and imported oil has caused this over-supply," he declared. Continuing, he said:

"We produced 111,000,000 barrels less in 1930 than in 1929, yet the importation of 105,000,000 barrels served to prevent the condition being bettered by our drop in production that year."

He said 22,800,000 barrels was the amount withdrawn from storage in 1930. And, during the first half of 1931, we produced 45,000,000 barrels less than in the corresponding period the preceeding year, he stated. He declared the oil industry, as concerns the United States, to be in the best statistical position it has been in for 10 years. And yet, he cited, 36 gravity crude has dropped from $1.45 to 12 cents per barrel in the Mid-Continent during the time that production was decreasing and consumption was increasing.

Franklin explained one chief reason for the defeat of the tariff in 1929 was opposition offered by the New England States.

"Yet," he said, "That part of the country has been built on protective tariffs. They resent the increase in fuel oil prices they figure would result from a protective tariff on oil; but they're standing in their own light by damaging their own market of 22,000,000 people, consumers of their goods, and dependent on oil.

He brought up the employment issue, stating some opposition believed a protective tariff would cause refineries to be built in foreign countries, thereby taking employment out of the United States; but declared that refineries on islands off the coast of South America already aggregated a capacity of around 400,000 barrels daily.

As other opposition he named the military defense plea so commonly brought up against an oil tariff. Franklin can't see a great deal of national safety in time of war in depending on foreign oil supply, and pictured the predicament that could result from dependence upon a foreign oil supply during warfare.

In comparison to the plight of the independent operator he quoted dividends of the Standard Oil group since dissolution in 1911 to December 31, 1930, at $4,019,929,872.00, and read the dividend figures by years since 1925, to show how they have continued upward.

"If we continue as we have for the past three years we will have completely destroyed United States oil properties," he decleared. "We cannot have prosperity in Texas nor any of the other oil states until business is put on a paying basis. We must fight, and use every weapon at our disposal!"

The Independent Petroleum Association of Texas, following completion of Wirt Franklin's address, adopted the following resolution:

"Whereas, the importations of foreign oil and of refined products are of sufficient quantity to constitute a major oil field, having a crude equivalent of around 250,000 barrels per day, and

Whereas, the efforts to have a temporary embargo declared by the national government have failed, and

Whereas, efforts to secure a substantial curtailment by agreement of the importers themselves has been only partially successful, due to the ignoring of same on the part of the most powerful importers,

Be it therefore resolved that the permanent solution to the import problem is by national legislation in the form of an import duty on same, and

Be it further resolved that this association, in co-operation with other organizations and individuals, make every possible effort to secure the passage of such legislation at the coming session of congress.

Be it also resolved that this body endorse the efforts of Mr. Wirt Franklin of Oklahoma City and Mr. Russell Brown of Tulsa, Oklahoma, officials of the Independent Petroleum Association of America, during the past two years to secure such a tariff and that we express our appreciation to them for taking part in this program, and that we pledge our co-operation to them in this fight."

The Honorable Bailey W. Hardy of Breckenridge, Texas, was the keynote speaker of the morning session of the meeting, talking on "Imports and Control." He gave importations of crude oil from South America as the cause of the industry of the United States being at such a low ebb, and drew his facts from a long period of research

into this question. He reviewed in detail the many steps taken by committees of the government and the American Petroleum Institute, and charged that none of the work done thus far had been in the interest of the majority of operators in this country, but to the few who were so powerful as to be able to control the markets. He declared that securing a tariff on imported crude was not only possible, but was reasonable to attain, provided the independent operators of the country would unite and demand it. He charged the latter group with "sleeping on the job" and allowing themselves to be "bull-dozed" into submission, and urged a bitter fight for protection in the form of a tariff if it meant boycotting of large company products, or even if became necessary to bring sufficient pressure to bear to put through the legislature a law prohibiting companies of more than $1,000,000 capital stock to operate in Texas, or to refuse companies controlled by out-of-state capital to operate in the state.

The Honorable Morgan Sanders, United States congressman from Texas, speaking at the meeting, won rousing cheers from the Tyler gathering when he told them not only how to go about getting a hearing in Washington at the coming session of congress but added that he himself would start the ball rolling. He stated that the United States was now consuming 227,000 barrels of crude daily more than we were producing, and that the plight of the operator was ridiculous. He suggested that if our federal government had a reasonable revenue from all foreign oil now coming into this country that our treasury wouldn't be so near bankrupt.

Other prominant speakers on the program voiced like sentiments to Wirt Franklin's most staunch followers were C. V. Terrell, chairman of the Texas Railroad Commission, Tom E. Cranfill, president of the Texas association, who presided at the meeting, Colonel T. N. Jones of Tyler, Major J. R. Parten, vice president of the Texas association, who presided at the afternoon session, General Jacob Wolters, in command of the East Texas martial law, who was a guest at the meeting, and Carl Estes of Tyler, a leader in the fight for the small operators and royalty owners of East Texas. Estes, through his Tyler newspapers, was host to the gathering with a barbecue at the Tyler fair grounds, where the meeting was held in the auditorium.

Oklahoma Production Limit Of 545,000 Barrels Sought

Tulsa.—Through the proration committee of Mid-Continent Oil & Gas Association a production total of 545,000 barrels daily will be sought from the Oklahoma Corporation Commission. The hearing to fix the allowed output for the state for November and December will start at Oklahoma City October 26. The committee met in Tulsa October 15 and drafted a program of output as follows:

	Barrels
Stripper well fields	191,000
Oklahoma City field	180,000
Seminole fields	155,000
Other prorated fields	19,000

This total is only 1000 barrels below the figure set for Oklahoma at the conference of conservation officials in Oklahoma City September 11. Previous to its meeting the committee made a canvass of purchasing concerns, and from the reports given, came to the conclusion that there will be a market for this amount of oil out of Oklahoma pools for the remainder of the year.

Another recommendation that will be made to the commission will be that the potential of the Seminole fields be taken and that the output there be kept at 50 per cent of potential output. It was the further opinion of the committee that any additional demand for Oklahoma crude oil be allocated to the Oklahoma City pool.

Members of the committee present for the session were Alvin Richards, vice president of Pure Oil Company; Burdette Blue, Indian Territory Illuminating Oil Company; E. R. Filley, The Texas Company; Wirt Franklin, Wirt Franklin Petroleum Corporation; E. J. Nichlos, Continental Oil Company; J. S. Sidwell, Prairie Oil & Gas Company, and R. M. Young, Carter Oil Company.

The amount of oil suggested by the proration committee is in keeping with the total suggested in other quarters. John A. Miley, attorney for the operators seeking the hearing, will file the petition next week. Most of the fields are now producing about what the committee will ask. Present production is under orders of martial law, which were altered last week to allow the Oklahoma field to re-open and the Seminole area to produce more oil than it did under the orders issued in August.

Sand Thickness at Van Is Used as Basis for Proration

Tyler, Texas.—Scientific methods closely adhered to by operators in the Van field since the drilling of the discovery well have made possible the immediate adoption of the oil producing sand thickness as the basis for determining proration allowances for each lease. The Texas Railroad Commission issued an order October 17 for substitution of the old plan of fixing proration allowables on a basis of well potential averages per 40-acre unit to the acre-foot of sand beneath each lease after holding a hearing on the matter October 13. The present allowable production of 50,000 barrels daily is to be continued, although royalty owners made plea for a 50 per cent increase, while officials of Humble Oil & Refining Company, one of the two purchasers serving the field, recommended that the allowance be cut.

An accurate check on the Woodbine sand thickness of all wells drilled on the unitized portion of the field has been obtained by Pure Oil Company, operator, by coring the sand in every well drilled. Similar practices have been followed by most of the owners of 61 producing wells situated outside the unit block. The 260 completed oil wells were credited with a combined daily potential of 499,722 barrels flowing through 11/16-inch choke on 2½-inch tubing, or approximately 2,500,000 barrels daily on an open-flow basis. There are 17 pumpers in the field.

It is understood that Humble Oil & Refining Company's reason for requesting a production cut at Van was to enable the company to divert that portion of the cut to the East Texas oil field, where a growing number of operators are encountering trouble in obtaining connections and market relief from companies paying the 68-cent posted price. Unless connections are provided promptly these operators are apt to accept the best price obtainable from East Texas refiners who are constantly on the alert for below posted price crude.

Personal Mention—Men You Know

▼ ▼ ▼

F. W. HERTLE, Associated Oil Company, president; D. C. Peet, Seaside Oil Company, secretary and treasurer, and R. E. Stewart, chairman for the occasion, of the Ventura Chamber of Mines and Oil, are making preparations for the fifth annual golf tournament and barbecue, to be held October 24.

J. H. JENKINS, manager of field operations for Associated Oil Company, recently returned from an extended Hawaiian trip. His health is now better than at any time since his serious illness more than a year ago.

LEW SUVERKROP, well known petroleum engineer of Bakersfield, California, is now operating a lease in the Maricopa district.

SCOTCH CAMPBELL and POP Roberts, formerly petroleum engineers in the umpire's office at Long Beach, are touring Europe. Campbell was at one time connected with Richfield Oil Company.

F. C. RIPLEY, general manager of Chanslor-Canfield Midway Oil Company at Los Angeles, is spending his vacation in Chicago.

WILLIAM BIERKAMP, JR., 55, president of Advance Oil Company, died from a stroke October 18 while visiting his parents at Durant, Oklahoma. The body has been forwarded to the deceased's home at Fort Worth for burial.

PETER HARDING WILLIAMS, 57, pioneer oil operator and drilling contractor, who had an interesting career, died at San Angelo, Texas, October 15, following an illness of over a year. He gained considerable prominence in late spring of 1930 when he established a world's record in deep drilling with cable tools, reaching 8900 feet in his Irion County, West Texas, wildcat test, Ashe Brothers 1, which failed, however, to develop production.

Williams gained his start in the oil business by doing field work at Beaumont, Texas, about 30 years ago, and for the past 18 years had been engaged in contracting work, with an occasional oil strike for his personal account. In 1915 he assisted in shutting in what was at that time the world's greatest oil well, and what is still considered one of the most remarkable of all oil wells, Mexican Eagle Oil Company's Potrero del Llano No. 4, in which the South fields near Tampico, Mexico, which had run wild for three months. That well had "come in" December 26, 1910, flowing around 100,000 barrels daily from 2000 feet, and is still producing 21-22 gravity crude after having placed over 115,000,000 barrels upon the market, not counting lost production in the mentioned period when it ran wild and during an earlier seven-months' period when it was on fire after being struck by lightning.

Williams is survived by his widow, one son and one daughter. With his son, J. P. Williams, he operated in recent years in West Texas under the firm name of Williams & Williams Drilling Company.

FRANKLIN WILBUR KIRK, general manager of Houston Pipe Line Company, is a man whose broad experience in all branches of the producing and transporting divisions of the oil industry has peculiarly fitted him for the position he occupies.

Frank Kirk came out of the ranks, mounting the ladder of hard knocks one rung at a time. He was cradled on a lazy bench, with small tongs for childhood toys, so to speak. He is one of those "old timers" whose principal source of happiness is work; he doesn't play golf, and doesn't hesitate to let you know he is not interested whether you went around the course in 68 or 168 strokes.

—Blank and Stoller
F. W. KIRK

His parents were oil people back in Indiana in 1873, when Frank Kirk was born, and his boyhood was spent in one-strapped jeans soiled successively by the oils of Ohio and Western Pennsylvania, Oil City and Titusville. He went to elementary schools in Wilmington, Ohio, and St. Pierre Academy at Lake St. John, Quebec, where he won the Sam Murdock scholarship entitling him to the mechanical engineering course he took at Purdue.

Mr. Kirk's first job was not exactly a salary proposition. He tended an old pumping lease in Pennsylvania for an elderly relative, Dave Kirk, who subsequently was largely instrumental in the formation of the Joseph Seep Purchasing Agency. He received no pay while Uncle Dave was on the job, but when Uncle Dave went hunting, it was understood Frank would profit if a purchaser happened along.

In 1888 he obtained his first job, that of lead melter and pourer on the then famous Chicago gas line. From 1889 till 1905 he dressed tools and drilled cable tool wells, being all this time an Up-and-downer, never a Round-and-rounder. In 1905 Frank Kirk went with Wichita Natural Gas Company, now a part of Cities Service system, in the capacities of chief warehouseman and gang foreman. During three years which followed he worked in nearly every capacity for this organization. Then in 1908 he went to Columbia as pipe line inspector and all-round utility man for Cincinnati Gas Transportation Company, which organization was building the main section of the line from Central West Virginia to Columbus, by way of Kentucky. Early in 1909 he took a fling at California as warehouseman in Taft, then returned to the Kansas Natural Gas Company at Independence.

Work engaged in by Mr. Kirk from 1888 to 1905 was spasmodically interrupted by piecemeal completion of his education and participation in the Spanish-American War of 1898 as a first class stoker aboard one of the active battleships. During this war, (he has been through two), he tasted some of the glory that goes to aspirants for the middleweight championship of wrestling and fighting in the navy. "If I won", said he, "the officers and other

gentlemen of gambling instinct aboard used to give me a small share of their winnings. If the champion of another ship of line whipped me, then it was shovel coal like hell for a week on a diet not exactly calculated to put meat on one's bones. At wrestling I was pretty good, but at fighting—why, I couldn't fight for sour owl feathers!"

Before 1912 Mr. Kirk was employed as a pipe line inspector by Lone Star Gas Company of Fort Worth, then was promoted to main line foreman, then to general superintendent of the pipe line division. During the World War he was in charge of construction on the helium line laid from Petrolia to Fort Worth under direction of the Bureau of Yards and Docks, United States Navy.

In 1920 the drilling bug bit him again, and he went to Ranger, Desdemona, Sipe Springs and Breckenridge as an independent operator. Here he made a fortune, and began to visualize retired life on an Ohio farm. The president of a Fort Worth bank had told him, and convinced him, that the oil business was a gamble. Moreover said banker sold Franklin Wilbur Kirk on the idea that he, the banker, should tell him how to invest his nest egg conservatively. The investments were made, and a short time after, perhaps a year or two, Franklin Wilbur Kirk, stone broke, headed south into Mexico and Central America on appraisal work. The banker headed north.

"After this experience, the most impressive course of my education, I ambled back to Texas, going to work for F. M. Lege, Jr., on the Magnolia's line from Beaumont to the Monroe gas area. In 1924 Mr. Buckner (E. H. Buckner of Houston Oil Company) began to wonder about the feasibility of a gas line into Houston and asked Lege to recommend someone for the survey to Mt. Lucas. And Lege saw a golden opportunity to get rid of me."

Late in 1924, Mr. Kirk came with Houston Oil Company to survey right of way for the line. He has since gone up the ladder to his present position as general manager of Houston Pipe Line Company. His duties are, he says, "to squelch crap games, keep expenses down, and make an occasional trip to Laredo." Incidentally, as a side line, he ranks high as an authority on all phases of pipe line construction and gas transportation.

CARL EGNER, sales representative for the past seven months in East Texas for Mid-Continent Supply Company, has been transferred from his Kilgore headquarters to the company's home office at Ft. Worth.

JOE STEIN, general superintendent of drilling and production for Kirby Petroleum Company in East Texas, suffered a broken ankle early last week when a switch engine bumped a string of cars on a side-track at Kilgore, where he was inspecting a car of pipe.

ELRICH H. DOBIE, who has been with Dutch Shell Oil Company in Java, Dutch East Indies, for nearly five years, is on his way to the United States with Mrs. Dobie and their little daughter. Dobie's home is at Beeville, Texas, where his mother, Mrs. R. H. Dobie, and sister, Miss Fannie Dobie reside. He is a brother of J. Frank Dobie of Austin, famous author of "Coronado's Children."

GEORGE H. SHELTON, district geologist for Stanolind Oil & Gas Company San Antonio office, is spending his vacation in East Texas.

GEORGE E. TOTTEN has been appointed manager of sales of the Tin Plate Division of Republic Steel Corporation with headquarters in the general offices of the corporation in Youngstown, Ohio, according to an announcement by N. J. Clarke, vice-president in charge of sales.

N. A. ROUSSELOT

N. A. ROUSSELOT, manager of field operations for Milham Exploration Company, California subsidiary of Seaboard Oil Company, is a graduate of Stanford University and has had wide experience in the fields of geology and petroleum engineering. He was connected with the petroleum engineering department of Union Oil Company during 1923-24 and started with Milham Exploration Company as geologist late in 1924. He was in charge of drilling operations when his company discovered the Kettleman Hills field in 1928.

JOHN D. ROCKEFELLER and Mrs. Rockefeller have been guests of Superintendent Woodring, of Grand Teton National Park, Wyoming. Mr. Rockefeller made several pack trips into various parts of the famous Jackson Hole country, in which he is at present very much interested through his Snake River Land Company. A project of buying up ranches and farms in this historical and scenic wonderland is now under way with the future plan in mind of turning all of the land back to the federal government to be used and administered as an addition to the Grand Teton Park.

M. C. MORRIS is now associated with Hall & Lowrey Iron Works, Inc., Goose Creek, Texas, as sales manager, with headquarters at Houston. Mr. Morris for the past five years has been associated with International Derrick & Equipment Company, as district manager at Houston, division manager at Fort Worth, division manager at Shreveport, and South American representative at Maracaibo, Venezuela. For five years before that period Mr. Morris was associated with National Supply Company at Fort Worth and Dallas, Texas, in charge of the Dallas office.

FRANK SCHNEIDER, vice-president Simms Oil Company, Dallas, Texas, is on vacation accompanied by members of his family in Mexico City, having made the trip from Galveston to Tampico by boat.

JUAN PALOMAR, C. E., is now the wording on the sign in front of Juan's office at Calle Hospicio, 63, Guadalajara Mexico. Formerly in the Material and Engineering departments of The Huasteca Petroleum Company, at Ebano, west of Tampico, he left the company in 1928 to complete his engineering studies in Mexico City.

J. E. WALSH, Larero Gas & Petroleum Company, has returned to his office in San Antonio after spending some time in the East.

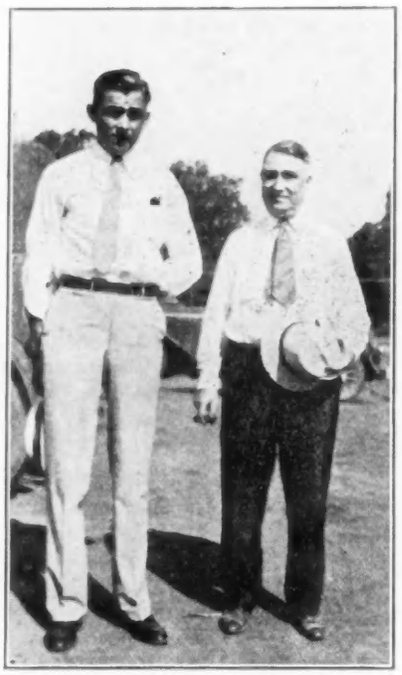
"SHOTS FROM THE HOT SPOT"

H. C. Siegley, on the left, covers East Texas fields for Hinderliter Tool Company, working out of Tyler; and R. W. Barnhill, Hinderliter store manager at Willow Springs.

G. A. Knight, who came to Hercules Supply Company in East Texas where he served Continental Supply Company (left); and L. R. Roberts, store manager for Hercules Supply Company at Willow Springs.

Walter Route (left), salesman for Baker Oil Tools, Inc., in East Texas, with Longview headquarters; and Burt Ligon, a member of the E & L Burner Company, who is devoting most of his time to East Texas.

C. R. Ross, left, store man for Peco Supply Company at Willow Springs; and Tuck Butler, Republic Supply Company salesman in East Texas.



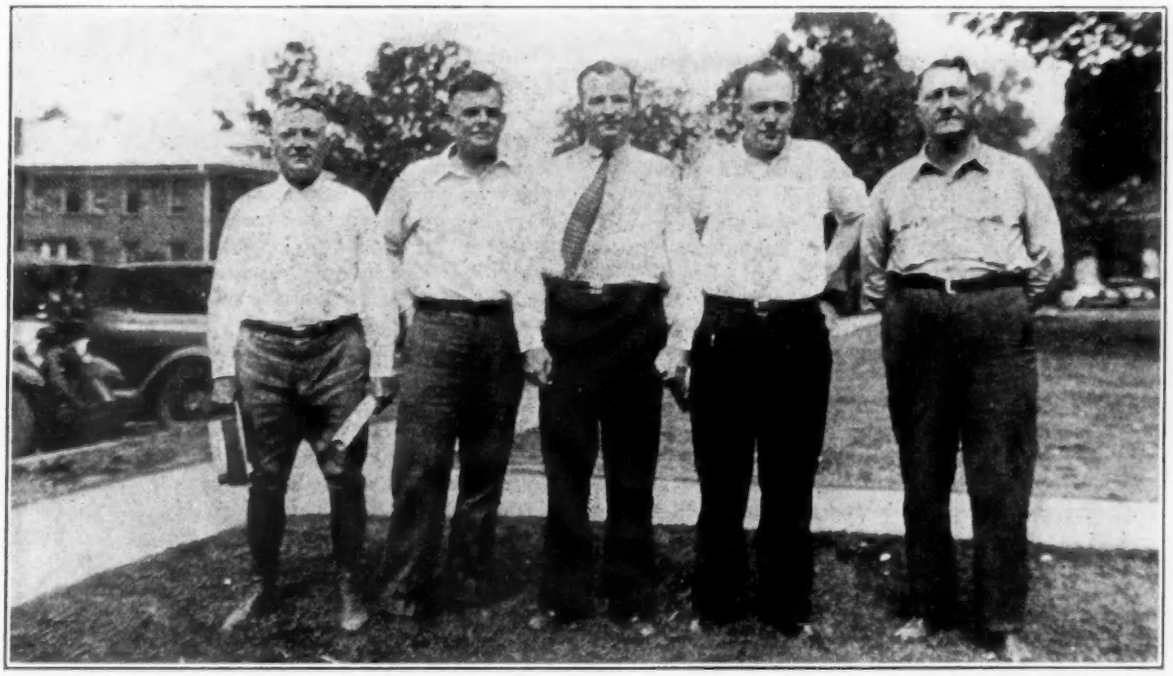
J. E. Harrel, salesman for Lee C. Moore out of Shreveport, left; and the boss, W. H. Payne, who has charge of sales in the Southwestern district, with offices in Dallas.

Don Knowlton (left), petroleum engineer, Oklahoma City district; and Charlie Klein, production superintendent, Oklahoma district, Phillips Petroleum Company.

A Photographic Record of Who's Where in East Texas

Left to right: R. G. Houser, vice-president and sales manager, Diamong Metal Company, Houston; Ralph Dinger, designer of Dinger bit; and A. C. Evans, Allen Machine Shop, Gladewater, Texas, branch.

Left to right: L. J. Sherrod, Gladewater store manager; J. R. Custer, East Texas field representative; and H. R. Carpenter, Mid-Continent district manager out of Bartlesville, Jarecki Manufacturing Company.



Left to right: Chuck Tucker, drilling contractor of Dallas; Kirby Smith, sales manager, J. H. McEvoy & Company; George O'Leary, secretary-treasurer, Houston Oil Fields Materials Company; Jack Bannister, sales manager, Gulf Coast Machine & Supply Company; and Guy Tucker, drilling contractor. This picture was taken at Longview.

News From California Fields

BRAD MILLS, ***Staff Representative, Los Angeles, California***

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Opening of New Producing Zone at Elwood Accomplished

Santa Barbara, Calif. — Barnsdall Oil Company and Rio Grande Oil Company have completed Bell 14, a deep test in the Elwood field with an initial production of 2800 barrels of 42.3 oil. This well was deepened to the Sespe formation at 4392 feet and is one of the largest completions ever finished in this zone. The value of the Elwood field is greatly increased with the discovery but it is doubtful whether the new producing zone will prove anywhere near equal the Vaqueros sand above.

If the Sespe produces satisfactorily the Elwood field will assume a much more important position in California. The field has been one of the most profitable ever found in the state, the Vaqueros zone having yielded a very large quantity of light oil from a very shallow depth. The accessibility of the Sespe would make the zone very attractive to all operators. This formation does not have a very good producing record in other districts, but there is no definite reason why it should not produce satisfactorily on well formed anticlines. The heavy gas pressure in Luton-Bell 14 is a favorable indication, since fear is generally held that the Sespe is a cold, dead zone.

Superior Establishes Record Of Three Wells on Edge Leases

Coalinga, Calif.—Superior Oil Company has completed Huffman 3 with an initial production in excess of 10,000 barrels, establishing a record of three large wells on an edge lease out of three attempts. Huffman 3 was completed at 8490 feet and is the deepest of the trio. The new well has an absolute potential much greater than the rate at which it was allowed to flow. The oil is 36 gravity and shows a cut of only one-half of one per cent. Absence of water in all three of the completions on this lease speaks well for the quality of the producing zone and the skill of the drilling crews.

The Temblor zone was found at 7067 feet and a string of 9⅝-inch casing cemented at 7046 feet. About 1600 feet of seven-inch liner was run, including 1082 feet of perforated. This liner was landed on bottom and cemented through perforations at 7406 feet. The top gas was completely shut off, as evidenced by the small gas production of less than 10,000,000 cubic feet. The original flow was obtained through 90/64-inch and 96/64-inch beans, but a more modified flow is now coming through two 68/64-inch beans. After a potential is established, the well will be beaned back to meet curtailment provisions. This latest completion is located on a lease which was regarded until a short time ago as of little value. The completion of Huffman 1 changed this picture, however, and a good production was expected of Huffman 3.

Petroleum Securities Company is coring in a very hard, tight sand at 8550 feet in Burbank 1, deepest test on the Middle Dome, and the outlook is plainly discouraging. The formation shows only a trace of a cut and very little odor. The sand appears to be so tight that oil had little chance to enter it. A string of 8⅝-inch casing was cemented, supposedly over the Temblor, at 7326 feet, and with so much hole open below this shut-off, the outlook is doubtful. Geologists believe that the well has about an even chance at production, but only more conclusive tests can determine the value of the formation.

Associated Oil Company has started work on Whepley 3, an offset to two producing wells on the lease, and will be ready to spud within a short time. Whepley 1 was one of the first wells to obtain a heavier production through shutting off of the upper gas zone.

North American Oil Consolidated is coring below 8900 feet in Blauvelt 1, an edge test on the North Dome, and has the chance of establishing a new record for deep production. The 8⅝-inch shut-off was made at 8485 feet and as much as 1000 feet of sand may be opened before a test is made.

Kettleman North Dome Association is active in eight wells, and does not expect to increase this number for several months. Two of these wells are being drilled more to test the extent of the field than to increase production.

Lost Hills Field Deep Test Recemented Under Pressure

Bakersfield, Calif.—Lincoln Petroleum Company has recemented under pressure Theta 1A, deep test in the Lost Hills field, following a production test which was not satisfactory. The high pressure water was at first thought completely shut off but further testing around the shoe of the 4¾-inch casing showed a small amount of water. Theta 1A was drilled to 5328 feet, but failed to produce more than a small quantity of oil on a production test. A bridge was found at 5240 feet, but this difficulty did not prevent a successful test.

The Lost Hills field has long been regarded as a possibility in the Temblor formation, but the few tests of the deeper formations have been disappointing in the extreme. The relation of the field to Kettleman Hills and North Belridge has been studied extensively, but opinions differ as to the probable depth of production. The field lies farther out in the San Joaquin valley than either North Belridge or Kettleman Hills, but the original foundation on which the more recent deposits were made could have been higher than the fields nearer the edge of the valley in its present state.

Certain shales found at Kettleman Hills are found shallower at Lost Hills, but since the tendency is to thicken south and east of the North Dome at Kettleman Hills, there is a possibility that production may be found considerably below 6000 feet at Lost Hills. The Temblor zone is found at almost exactly 5000 feet at North Belridge, a few miles to the south and west of Lost Hills. Oil sand has been cored in Theta 1A, but its texture does not point to a large production.

A well completed in another field and producing from a similar sand, came in with a very small production. Deeper drilling at Lost Hills might be of value, but the size of the hole is such that another string of casing can not be run.

Huntington Beach Well Makes Good Showing in Recent Test

Huntington Beach, Calif.—W. E. McCaslin's Transport 17, deep test in the Huntington Beach field, made a surprisingly good showing on the most recent production test, flowing at the rate of 500 barrels for a short time. This well was originally drilled to 8365 feet and tested several times, but only a small amount of oil was obtained. As a last resort, the liner was perforated between the 4¼-inch shut-off at 6875 feet and 8000 feet and the well swabbed. A good flow by heads followed, with a cut of about 20 per cent. The action of the well points to commercial production at some point between 7000 and 8500 feet, but the few wells drilled to those depths prove that definite isolation of the oil zones will prove difficult.

Transport 17 has had an interesting history, but it can not yet be called a commercial producer. It was tested several times below 8000 feet, and shots were placed at various levels prior to one test. Cleaning out proved difficult and little came of such extensive efforts. The new production is apparently coming from a hitherto untested zone below the last water shutoff. The presence of water is not a favorable indication, but the many adjustments made could easily account for this trouble. The danger of water was recognized when the added perforations were included. The action of the well indicates that commercial production is possible if the right zone is included and a water shut-off can be obtained.

Superior Oil Company drilled Eberle 1 to 8415 feet and swabbed the well for a preliminary test, but only mud and water were in evidence. More hole will be made. This is the deepest well ever drilled in the field and may be regarded as a representative test of the lower zones.

Bakersfield, Calif.—Belridge Oil Company is approaching a depth of 6500 feet in No. 64-27, a deep test in the North Belridge field, and has encountered good showings in a hard sand below 6000 feet. This well is being drilled with the utmost secrecy and is nothing more than a very deep test in a field which has already proved productive in the Temblor between 5000 and 5500 feet. The tests drilled below 5500 feet were located off structure. No. 64-27 being the first located within the proven limits to be drilled through the Temblor zone.

Los Cerritos 8100-Foot Zone Producers Show Rapid Decline

Long Beach, Calif. —Operators who shook their heads and predicted that the new 8100-foot producing zone at Los Cerritos would show a rapid decline seem to have won their argument, judging from the individual action of the few completions below 8000 feet. The best producers have declined rapidly and several tentative locations have been cancelled because of these performances.

Ring Petroleum Corporation's No. 18, which blew in flowing at a 2000-barrel rate, declined to a much lower figure and was deepened to 8250 feet. On the latest production test the well flowed barely 500 barrels, cutting about 20 per cent. Initial production of gas at the shallower depth was nearly 10,000,000 cubic feet, but this high total was apparently caused by pressure which built up in the hole. This part of the field has shown high pressures at various levels, and its release has resulted in lower production from individual zones within short periods of time.

Most of the 37 active wells in the field are being drilled or deepened in the Los Cerritos sector. Few new locations are being made, but many wells have been killed for deepening. Under present conditions only a limited amount of drilling will be done. Several years ago discovery of any deeper zone would have led to extensive activity, but the average operator is content to hold what he has. This is especially true, since the field has a much higher potential than actual production.

Weed Patch Shallow Well Is Being Placed on Pump

Bakersfield, Calif.—Osborn and Colter are placing Duff 1, a shallow test in the Weed Patch area, on the pump at 1952 feet to test the upper zone near a field which produced satisfactorily around 5900 feet. A bailing test showed fluid entering the hole at the rate of 200 barrels per day, but the well did not flow. A string of 8⅝-inch casing was cemented at 1912 feet and a short perforated liner run for the production test. The small amount of oil is probably coming from the Kern River series of the upper Pliocene, but some doubt exists as to the formation.

Shell Oil Company completed an 1100-barrel well at 5900 feet to open up the field, but production in Duff 1 is much higher than in the discovery well. Attempts have been made to associate the sand with the Jewett zone in the Round Mountain field, but the Kern River zone offers the best comparison.

The Weed Patch field lies roughly in line with Fruitvale and the Union Avenue district and is farther out in the valley than the other fields. The discovery well around 5900 feet produced a heavy oil, but it showed excellent cracking qualities and was a better oil than the shallower crude produced along the east side of the San Joaquin Valley.

San Miguelito Discovery Well Has Difficult Fishing Job

Ventura, Calif.—Continental Oil Company's Grubb 1, co-discovery well in the new San Miguelito area, has been held up with a difficult fishing job at 6640 feet. The 5¾-inch liner was cut and pulled up to 6525 feet, and the wash pipe lost in the hole is being cut and pulled. Water was located near the shoe of the casing and a recementing job will be necessary.

The well flowed at the rate of 1000 barrels for a short time during the water shut-off test, but the performance was not steady under such conditions.

The new field is located about midway between the Ventura Avenue and Rincon fields and is an important discovery. Its value is still unknown, however, and only more drilling will determine this factor. The Rincon field to the west did not prove to be a productive field, while the Ventura Avenue field to the east is one of the best in the state.

Chanslor-Canfield Midway Oil Company must share honors with Continental Oil Company in the discovery of the San Miguelito field, its Hobson A2 having produced oil on the compressor at 7479 feet at the rate of 250 barrels per day. The well was subsequently deepened to 10,030 feet and became the deepest in the world for a time. It has been plugged back to 7825 feet and is being tested on the compressor.

San Francisco.—Pacific Gas and Electric Company is building a 26-inch natural gas line between San Francisco and the San Mateo County line, a distance of about seven miles. This short stretch will later become a part of a 44-mile 26-inch line between Milpitas junction and San Francisco. The longer unit will become necessary if consumption increases at the expected rate.

New Mexico and Rocky Mountain Area

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Hobbs Potential Is Lowered; Allowable Is Raised Slightly

Hobbs, New Mexico.—Downward revision of 33,994 barrels in the estimated potential production of the Hobbs field was made at the start of the October 16-31 proration period, according to Umpire E. G. Staley, and allowance of the field was increased from 36,968 barrels to 37,077 barrels daily. These changes were made because of several wells heretofor rated with a high potential are now making large quantities of sulphur water that can be held in check only by sacrificing a portion of the earned production allowable. Arrangements have been made to assign a flat production quota to these edge wells that are showing water, and distribute the surrendered quota equally among other wells in the field. This plan will absorb some of the shortages in monthly production that have occurred since wells began making water and had to be throttled down. Four tests are now drilling in the field, including one each by Continental Oil Company and Gypsy Oil Company that have reached the shallow gas horizon.

Brenning Basin Shallow Pool Gets Sixth Operation

Douglas, Wyo.—Three C's Oil Company is drilling another well in the old Brenning Basin shallow pool west of Douglas, in Converse County. The hole is bottomed around 200 feet with production expected at 350 feet. The test was located by John Ackard of Colby, Kansas, with his mechanical oil finder. Mr. Ackard has guaranteed that the well will make more than eight barrels per day. The company produces five wells in the field which have a daily production, together, of about four barrels. The oil is trucked to Big Muddy, where the company has a small skimming plant and has been selling gasoline, motor fuel, and residuum locally.

North Fort Morgan Dome Test Arouses Interest

Greeley, Colo.—Guarded by deputy sheriffs under orders to keep out every one, Colorado Associated Oil Company's Pumphrey 1, on the North Fort Morgan dome, took the spotlight momentarily away from the operations on Greasewood Lakes structure in the Northeastern Colorado area last week. While scouts sat on adjacent hillsides and watched the operation through field glasses, the work of core drilling continued deeper, but whether anything of interest had been discovered remained a secret, and no information concerning the formation into which the drill was penetrating could be obtained. This test was spudded in last July by a company formed of various interests. Midwest Refining Company turned over the acreage and some equipment; Olson Drilling Company is doing the drilling; other interests furnished financing and geological reports. Structure is believed to be much higher than the Greasewood dome, some estimates running up to 700 feet higher.

On Fort Morgan anticline Indian Territory Illuminating Oil Company's wildcat is drilling again below 5900 feet. Both the Muddy at 5572-5602 feet and the Dakota at 5654-5674 feet were dry. Formation at last report was presumed to be sand on top of the Lakota.

Operations on Greasewood Lakes structure, the discovery dome in the territory, are held up pending the completion of Continental Oil Company's Gadbois 1, located one-half mile south of the discovery well. Outfit has been changed from rotary to cable tools, casing is set, and well was due to start drilling in the first of this week.

Ramage Lease, New Mexico, Near Artesia, to Be Tested

Artesia, N. M.—There has been considerable interest here recently by assignment of the oil leases and properties of the late A. R. Ramage to Arba Green and the announcement that drilling contracts and agreements had been entered into with Western Drilling Company, which planned an immediate test. The Ramage properties lie about four miles north of the Artesia field; they consist of one 640-acre government lease, one 160-acre state lease, and one producing well. The properties were at one time regarded as the most promising in the Artesia area, and but for the death of Mr. Ramage, would probably have been adequately tested. Western Drilling Company will drill on NW 29-17-29, and is now moving in material.

Company Is Formed to Drill Second Barker Structure Test

Hot Springs, S. D.—Barker Structure Drilling Company has been formed by a group of Rockford, Illinois, stockholders in Black Hills Petroleum Company for the purpose of drilling another well on the Barker structure, southwest of Hot Springs. At the present time the discovery well is furnishing fuel for the deepening of Rockford 1, which was drilled to 1370 feet and drilling suspended because it seemed that the location was an edge one. It was intended to salvage the pipe to use in a third well to be drilled on the structure, but when the tools were run into the hole there was such a good showing of oil that it was decided to drill the well deeper. The discovery well, Barker 1, is good for five to six barrels per day from the Minnelusa at 1328 feet.

Red Lodge, Mont.—Ohio Oil Company's L. P. Chapman 1, which was rumored last week to have developed commercial production in the second Frontier, is reported to be headed for the Dakota series and drilling below 4800 feet. The showings in the Frontier were far from commercial. The well is on the company's properties in the Dry Creek field, Southern Montana.

Worland, Wyo.—Deep wildcat test of Ohio Oil Company on Nieber dome, in Washakie County, Wyoming, is continuing deeper from the Frontier formation which had some small showings of oil and gas, but not in commercial quantities, and is now headed for the Sundance. Last depth was 7875 feet and formation was reported to be the Mowry shale.

Oklahoma--Kansas Field Notes

FLOYD SWINDELL, ***Staff Representative, Tulsa, Oklahoma***

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Oklahoma City's Average Is Only 165,630 Barrels Daily

Oklahoma City.—Despite the fact that the Oklahoma City pool produced 349,063 barrels the first 24 hours after re-opening, the week ending Saturday, October 17, showed a daily average production of only 165,630 barrels, or approximately 20,000 barrels below the figure that had been estimated on a basis of five per cent of potential. One important decision in regard to proration for the remainder of October is contained in the announcement that underproduction prior to October 10, will not be considered at this time and it is probably that an attempt will be made to cancel all underages accumulated prior to and during martial law. Such cancellation would be decidedly advantageous to a large number of the smaller producers and a few of the larger but would appear unfair in the cases of some of the companies which were underproduced many thousands of barrels.

The plan for the last 10 days in October contemplates an allowable production of six per cent of the witnessed potential, which is apparently a new term to the already confused potential question. Rated potential of the pool is 8,729,250 barrels of which it is understood one-third is considered in determining allowable. One-third of the above figure times six per cent gives an allowable of 174,585 barrels daily, leaving 371,415 barrels to be distributed among other state pools, if the inter-state compact is to be followed. Of this remainder the Seminole district, including Sasakwa, Konawa, Allen, and Asher, probably will produce approximately 165,000 barrels daily, leaving 206,415 barrels to be divided among the other flush and settled areas. All over-production during the period October 10 to October 20 in the Oklahoma City pool will be deducted from the allowable and all under-production of the same period will be added.

Twenty-four hour gauges for the first five days after reopening were as follows: October 11, 349,063 barrels from 117 wells; October 12, 124,652 barrels from 90 wells; October 13, 178,199 barrels from 111 wells; October 14, 150,205 barrels from 104 wells; and 156,991 from 98 wells. Saturday morning's gauge, 109,318 barrels from 91 wells. Of this number two were on gas lift and 89 were flowing natural. Anderson-Pritchard Oil Company, with five wells, produced 4507 barrels; Indian Territory Illuminating Oil Company with 28 wells, 22,492 barrels; Phillips Petroleum Company with 10 wells, 31,459 barrels; and Slick-Urschel with six wells, 4222 barrels. Six hundred and sixty barrels was the production from a new well, making a total of 63,340 barrels of the 109,318 barrels reported on Saturday morning's tickets.

One well was completed during the week and one well bailed down and cleaned out without gauging, bringing the total number of completions to 839, of which 39 are gas wells. One of the most interesting features in connection with the 65-day shut-down under martial law, is the probable effect on wells. It is not possible at this time to make a careful comparison of production since re-opening with that immediately preceding martial law. Several wells in the Arbuckle lime and lower Simpson horizons refuse to flow and a few are reported on the list for cleaning out. Engineers are not willing to say definitely that the shutdown is responsible for the condition of some of the wells but it is logical to expect that wells making considerable amounts of water would be temporarily and in some instances permanently damaged. Production records from the Wilcox sand indicate that this zone has not been injured and it is believed that the wells may produce at a greater rate at least for the first few times on production. Inconclusive data obtained in other pools have shown a temporary increase above normal decline for wells that were in good condition during shut-down periods but in most instances production settles to or below the normal curve and the affect on ultimate production in inconsequential.

Spring Rose Drilling Company's Henry 1, SE½ NE NW NW Section 2-11n-3w, encountered top of the Wilcox sand at 6252 feet and drilled to a total depth of 6367 feet, still in the sand. At this depth it produced 660 barrels of oil in 2½ hours and gas at the rate of 125,000,000 cubic feet under 1250 pounds rock pressure. Wilcox Oil & Gas Company and Day Petroleum bailed down and cleaned out their Laue 1, NE NW NW Section 10-11n-3w. No gauge was taken and the well is estimated at 30,000 barrels. It will take the 65-day shut-down before coming on production.

Ritz-Decker-Garrett Field Production Shows Decline

Wichita, Kansas.—Production in the Ritz-Decker-Garrett area of McPherson County, dropped approximately 5000 barrels to a daily average of 12,130 barrels during the past week. Potential of the area is now rated at 85,388 barrels and allowable production is set at 15 per cent of that amount. This is the first time in several weeks that production has conformed to allowable as set by the public service commission.

Although activity in the three pools has shown a gradual decline it is the only area wherein a drilling campaign is now in progress. One of the highlights of the week was the drilling deeper of Lario Oil & Gas Company and Shell Petroleum Corporation's Mary Boal 1, SE SE NW Section 24-19s-2w, in the southeastern portion of the Decker gas field. This well was originally completed for 500,000 feet of gas in chat at 2912 to 2948 feet, taking its initial gauge on March 18, 1931. Being a relatively small gas well and located favorably for oil production, prompted its deepening. After shooting with 20 quarts in Viola lime at 3390 to 3396 feet, it gauged 1493 barrels in 24 hours.

Dieter et al's Sellers 2, NW NE SW Section 19-19s-1w, in the Garrett sector, had Viola lime at 3396 to 3417 feet and was shot with 30 quarts at 3398 to 3410 feet. Its potential is 1216 barrels on a pumping test. Mohawk and Deep Rock Oil Corporation had 1600 feet of fluid in the hole from Viola lime at 3406 to 3407 feet in its McGill 1, SW SW NE Section 7-20s-1w. This test is located in the southeast edge of production in the Ritz pool.

Keys Petroleum Company's Gregory 1, SW SW SW Section 23-16s-9w, in the important Ellsworth Arch area,

was still carrying a hole full of water after encountering sandy lime from 3590 to 3600 feet. Eight-inch casing is set at 3125 feet below a sand which filled the hole with water at 3025 feet. The most recent start in the area is E. B. Shawver and Barnsdall's Schrocht 1, SE NW SW Section 25-16s-10w.

Two other older producers were deepened with an increase in production. Twin Drilling Company et al's Gratton 1, SW SW SE Section 19-19s-1w, originally completed for 346 barrels at 3434 feet, was deepened two feet and shot with 30 quarts. The hole filled 2000 feet with oil and on the swab it made 128 barrels the first 10 hours. Phillips Petroleum Company's Moorehouse 1, SW NW NW Section 3-21s-3w, in the north end of Voshell, was originally completed for 2181 barrels at 3395 to 3405 feet and had declined to a 10-barrel pumper. Shot with 10 quarts it did not increase and was subsequently deepened to 3411 feet, where it yielded 117 barrels the first 24 hours pumping.

Schurr Pool

Gauges on eight of the eleven wells in the Schurr pool in Rice County, indicates a total daily potential of about 8500 barrels. The remaining three wells were to be tested late in the week but no reports have been made on their production. The average of the eight wells that had been tested was 768½ barrels, as follows: Vickers Petroleum Company's Binger 1, 95 barrels; Binger 2, 347 barrels; Slick, Pryor and Lockhart's Schurr 1, 742 barrels; Producers & Refiners Corporation's Thompson 1, 428 barrels; Phillips Petroleum Company's Metzger 1, 1202 barrels; Slick & Allison's Metzger 1, 886 barrels; and The Texas Company's Thompson 1, 650 barrels. All tests were taken through 2½-inch tubing, with pumping stroke not exceeding 54 inches and a 2½-inch working barrel.

The Schurr pool was opened October 2 after operators and royalty owners had gone before the Kansas Public Service Commission in protest against the shut-down which had been in effect since January 1, 1931. Each well is allowed 100 barrels daily production until September 15, when allowable will be restricted to 15 per cent of potential. Assuming that total potential will not be in excess of 8500 barrels, the daily allowable will remain approximately as it now is, or 1100 barrels daily and not exceeding 1275 barrels.

Two Locations Announced For Old Goodrich Pool

Wichita, Kansas.—Continental Oil Company announced two locations in the old Goodrich pool in Sedgwick County during the past week. Both are on the former Marland Oil Company block upon which the Willard Goodrich 1 was a discovery well in 1929. This well came in unexpectedly in chat horizon at about 3000 feet and created a sensation when it was estimated from 5000 to 10,000 barrels daily. Subsequent wells did not prove large in the chat and it was not until late in September, 1931, that any well in the small group was deepened to Viola lime.

Continental Oil Company's Black 1, SW SE NW Section 16-25s-1e, was drilled to that formation for an initial gauge of 327 barrels in 20 hours. The new locations are: Number 1, SW SW SW Section 9-25s-1e, and Number 1, SW SW NW Section 15-25s-1e. Both are scheduled to start immediately since the leases expire soon.

Continental Oil Company's Eastborough Estates 1, SE NE NW Section 19-27s-2e, in the northern portion of the Eastborough pool in Sedgwick County, had a hole full of water in Misener sand at 3300 to 3312 feet and was drilling in Viola lime at 3336 feet after topping the formation at 3312 feet.

United States Deepest Test Is Now Down to 10,079 Feet

Cement, Oklahoma.—Mid-Kansas Oil & Gas Company and Ramsey Petroleum Corporation's Preston Culp 6, NW NW NE Section 6-5n-9w, deepest test in the United States, was running a string of seven-inch O.D. casing, preparatory to testing sands below 9800 feet. Total depth is now 10,079 feet in what is apparently a hard, tightly cemented sand. Two rock bits and a core barrel cut only about 10 inches of this formation and no satisfactory samples have been obtained as yet.

Officials of Mid-Kansas Oil & Gas Company have not definitely announced that they will continue drilling beyond this hard streak but the fact that they are setting 9800 feet of casing below all of the oil and gas shows, indicates that they will go back into the hole with three-inch tools and try to drill out of the Pennsylvanian series. Based on correlations by several geological departments, that the bottom of the hole is now in Lower Pennsylvanian, it is probable that the worlds depth record will be exceeded by several hundred feet before rocks of pre-Pennsylvanian age are encountered in this test. However, no exact determination can be made and it is entirely a matter of guess.

A bottom hole temperature of approximately 200 degrees has been measured and the company will use a large quantity of ice in cooling the hole and the cement as it is pumped in. This temperature is much less than would be expected at such great depth.

Northwestern Pittsburg County Deep Test Has Nothing Showing

Tulsa.—Pattison et al's Smith 2, SW NW SE Section 32-9n-16e, deep test in the northwestern portion of Pittsburg County, was drilling below 5782 feet in sand with nothing showing. This test is exceptionally interesting from several viewpoints.

J. L. Pattison started his first test in 1926 and lost the hole late that year due to mechanical difficulties. Smith 2, a twin to Smith 1, was started in 1927 and drilling has been carried on intermittently since that time. It has encountered gas sand at 1385 to 1400 feet, 1900 to 1902 feet, 4472 to 4525 feet, 4613 to 4635 feet, and at 4730 feet was estimated at 8,000,000 cubic feet. The following formations and depths have been reported: Mayes lime, 4965 feet; Woodford shale, 5065 feet; Hunton lime, 5100 feet; Sylvan shale, 5213 feet; Viola lime, 5262 feet; Simpson formation, 5300 feet; and Wilcox sand, 5443 feet.

At 5508 feet it was estimated at 500,000 cubic feet of gas with a small showing of oil, but a 130-quart shot at 5443 to 5560 feet, brought no results. From 5650 to 5656 feet the drillers logged sandy lime and at 5680 feet, a lime which was erroneously reported as Arbuckle lime. A hard white sand was entered at 5762 feet and the bit is still in it at 5782 feet.

Since no true sand has ever been found this far into the Arbuckle it is very likely that the lime and underlying sand is part of the Everton which is recognized in Arkansas between the Simpson formation and Arbuckle limestone.

Marshall County

J. L. Dixon was shut down with five-inch casing parted at his McDuff 1, SW SW SE Section 3-7s-6e, Marshall County wildcat located about three miles southeast of the town of Kingston. An oil sand estimated at five barrels and probably in the Trinity horizon was passed up at 791 to 828 feet. A second sand topped at 1164 feet, was being drilled at 1167 feet when the casing parted. Trinity sand

is basal Cretaceous in this area and but little is known of the underlying Pennsylvanian.

North of Davis

Capitol Producing and Refining Company was shut down at 2425 feet in its Cutchall 1, SE SE NE Section 6-1n-2e, wildcat test located about six miles north of Davis in Murray County. This test is located on the north side of the Arbuckle Uplift where the older formations were known to lie relatively near the surface. Sand and sandy lime with nothing showing were cored from 1292 to 1300 feet and a dry sandy shale from 1925 to 1938 feet. Eight-inch casing was cemented on top of a sand at 2080 to 2091 feet, but the hole bailed dry. Broken sand at 2286 to 2308 feet yielded 1800 feet of water. A limestone believed to be Arbuckle was logged from 2420 to the present total depth of 2425 feet. It is not known whether drilling will be continued or the hole abandoned.

Coal County

McGraw et al's Wand 1, NE NE SE Section 35-1n-8e, southwestern Coal County, was shut down at 1846 feet after mudding off gas estimated at 2,000,000 cubic feet from sand at that depth. Wapanucka limestone was logged at 1760 feet and six-inch casing set at 1765 feet. It will probably be drilled deeper.

Mannford District

Gled Oil Company's Holmes 1, NE SE NE Section 25-19n-8e, in the old Mannford district of Creek County, was drilling below 2567 feet, after having a show of water and an estimated 1,000,000 gas in Bartlesville sand at 2528 to 2564 feet. Showings of oil and gas have been found in the Skinner sand at 2145 to 2200 feet; Red Fork sand at 2383 to 2410 feet; and in the Oswego at 1992 to 2002 feet. The latter showing contained water and the Skinner was mostly gas.

Test North of West Chandler Pool Abandoned at 5120 Feet

Tulsa.—Magnolia Petroleum Company's Cash 1, SW NE SW Section 6-14n-4e, about one-half mile north of production in the West Chandler pool of Lincoln County, was dry, and was abandoned after finding a small show of oil and water in the Simpson formation at 5120 to 5130 feet. The following formations were reported: Oswego, 3915 feet; Mayes, 4630 feet; Woodford, 4850 feet; Hunton, 4890 feet; Sylvan, 4950 feet; Viola, 5056 feet; and Simpson dolomite, 5088 feet. It is only five locations north of the biggest wells in the western portion of the pool but in an area of known sharply dipping or faulted structures.

Hilton-Phillips' Phillips 1, SW SW NW Section 2-14n-3e, will be one of the most interesting tests to be drilled in Lincoln County in many months. It is located about two miles northwest of the West Chandler pool and on a northwest-southeast line drawn through that pool and the old Chandler field. Geological evidences at the surface are very indistinct and so far as is known the operators are playing trend. Nearest production is in the West Chandler pool, where production is being obtained from the Simpson formation.

Western Oklahoma

Price and McFann's Webster 1, CSW SW Section 34-8n-25w, southwestern Beckham County, is shut in with an estimated volume of 1,500,000 cubic feet of gas from 1890 to 1905 feet. This test is located directly northwest of the projected axis of the Wichita Uplift on a structural high as mapped on top of the Blaine Gypsum. Granite or granite wash was encountered at 2160 feet and penetrated to a total depth of 2344 feet. It was then plugged back to 1900 feet. Nearest production is in the Sayre pool which is approximately nine miles northeast.

Fatality Results From Fire at Oklahoma City

Oklahoma City.—Empire Oil and Refining Company's Gustin 2, SW NW NE Section 1-11n-3w, on the northeastern edge of the Oklahoma City pool, exploded and caught fire Monday afternoon, October 12, killing Charles Biddle, farm boss of Sedgwick Oil Company. After three unsuccessful attempts to extinguish the flames with steam and chemicals, Floyd Kinley, Tulsa fire fighter, was called in. At 10 o'clock Thursday morning he discharged 30 quarts of gelatin and was successful in blowing out the flame. Five hours later the well was shut in behind the master gates which had not been seriously damaged by the heat. John Longnecker, who was helping on the well at the time of the explosion and was the only other man on the lease, was unable to give any information as to what caused the disaster. Sedgwick Oil Company is a subsidiary of Empire Oil & Refining Company.

Oklahoma City operators have been unusually fortunate with the nine fires that have occurred at producing wells. Minor injuries have been sustained by several workmen but Biddle is the first to lose his life through explosion and fire.

The first big fire in the field was that of Sinclair Oil and Gas Company when its Stamper 3, became ignited October 8, 1929, while producing at the rate of more than 40,000,000 cubic feet of gas. The flame was shot out three days later and the well shut in on the fourth day. The second fire of consequence was that of Sinclair Oil and Gas Company and Amerada Petroleum Corporation on their Kinter 5, which ignited March 1, 1930, and burned until March 13, when it was extinguished with a shot of nitro. Its production was estimated at 150,000,000 cubic feet. All other fires have been of little consequence and have been shut in on the master gates after doing but little damage.

Oklahoma City.—The allowed output of wells in the Oklahoma City pool was raised from five to six per cent October 18. This change will continue for the remainder of October. The allowable for the field will be fixed through a hearing before the corporation commission for November and December. The five per cent figure had been effective since the re-opening of the pool under martial law.

Mullin-Uhlman Company Formed in East Texas

Longview, Texas.—Mullin-Uhlman Company has been organized by T. J. Mullin, Ray Uhlman, John Gray and others, with headquarters at Longview, to engage in the crude purchasing, transporting and marketing business in the East Texas field. This company is reported to have contracted to supply a portion of the crude requirements of the Chalmette, Louisiana, refinery of Chalmette Petroleum Corporation, using tank cars for making deliveries. Arrangements have been made for the use of tank car racks and local gathering systems in the Gladewater and Camps Switch sections of the field. Mullin is a well known figure in pipe line and crude marketing circles in the Southwest, and until recently was in charge of the East Texas system of Independent Pipe Line Company (Pilot Oil Company). Prior to this connection he was head of American Petroleum Company and also Cranfill-Reynolds Pipe Line Company.

East Central Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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New Record Set for Number of Active Drilling Operations

Longview, Texas.—Surpassing all previous records on volume of development activity by a wide margin, the East Texas field was credited with having 866 operations listed late last week, exclusive of the 2400-odd completed wells on production at the same time. Field activity increased by 92 operations during the past week despite the fact that completions continued at near the peak level. There were 195 new locations made during the past week, with 90 assigned to the Longview area.

Sinclair Oil & Gas Company's recently authorized major drilling program was very much in evidence this past week, as the company had 52 operations accounted for, and has not yet received approval of all of its locations from the commission. This company had 33 rotaries running on its various leases late last week, and was either erecting derricks or rigging up on 16 others, with three locations ready to move onto.

Although Humble Oil & Refining Company continues to lead in total field work listed, a steady decrease in volume is taking place each week, and the late check reveals 68 operations.

A comparatively few companies are carrying on the bulk of the drilling activity, as evidenced by the accompanying table, which lists all operators having five or more operations, and the 24 listed account for more than 50 per cent of the total activity.

The Longview area continues to show the greatest gains in field activity, with an increase of 51 operations this past week.

Included in the new locations for the past week were more than 50 authorized for leases receiving their first tests, and in approximately 30 days that many new leases will have been added to the production list. A higher percentage of this class of locations require from one to three offsets.

The financing of the weekly quota of new tests started in the East Texas field within the past six weeks has involved a stupendous sum. Approximately 520 completions have been made during the past six weeks, and when figured on a basis of an average cost of about $20,000 per well the aggregate for the period is in excess of $10,000,000. Locations have been appearing in greater numbers than completions in recent weeks. It is estimated that the heavy quota of new locations made during the past week will require an investment in equipment, labor, fuel, etc. of approximately $3,750,000, which is equivalent to about 5,514,706 barrels of East Texas crude at the present market price of 68 cents per barrel. By the time these new tests are placed on production the well allowance for the field will probably be cut below 150 barrels daily.

Operations East Texas Field

Most active companies operating in Gregg, Upshur, Rusk and Smith Counties, comprising the East Texas oil field, are listed below, with total operations held by each, exclusive of completions, as of October 16, 1931:

Company—	Locations	Derricks & Rigs	Active Tests	Total Underway
Humble Oil & Refining Co.	8	42	18	68
Sinclair Oil & Gas Company	3	16	33	52
Magnolia Petroleum Company	11	9	7	27
Gulf Production Company et al.	7	6	14	27
Tidal Oil Company	12	3	10	25
Stanolind O&G Co.	9	3	8	20
Stanolind-Simms Oil Co. et al.	.	4	2	6
Sun Oil Company	2	9	11	22
Arkansas Fuel Oil Co.	4	13	10	27
Yount-Lee Oil Co.	8	8	7	23
The Texas Company	3	6	11	20
Empire Gas & Fuel Co.	1	2	9	12
Mid-Kansas Oil & Gas Co.	3	7	4	14
Atlantic Oil Prod. Co. et al.	1	1	11	13
Shell Petroleum Corp.	.	1	11	12
Cal. Petroleum Corp. of Ven.	3	.	12	15
H. L. Hunt et al	1	5	6	12
Prairie Oil & Gas Co.	2	1	7	10
Barnsdall Oil Co. et al.	.	1	6	7
Golding-Murchison Oil Co.	.	8	2	10
East Texas Ref. Co. et al.	1	1	5	7
Vacuum Oil Co.	2	.	3	5
Roeser-Pendleton, Inc.	1	3	2	6
Grayburg Oil Co.	.	3	1	4
Total for 24 companies	82	152	210	444
Miscellaneous companies	60	150	212	422
Total	142	302	422	866
Total previous week	125	283	366	774
Operations by Areas				
Longview	74	131	188	393
Kilgore	45	75	104	224
Joiner	23	96	130	249
Total	142	302	422	866

East Texas Pumping Wells Total Has Increased to 63

Tyler, Texas.—The number of pumping wells in the East Texas field has increased to 63, according to a recent check made by scouts, and all of these are confined to the Joiner and Kilgore areas, while the Longview area, comprising that portion of the field lying north of Sabine River, has had no wells to decline to the pumping stage, although a few have to be agitated and swabbed at intervals.

The Joiner area is credited with 58 pumpers, and 21 additional completions that will not flow, and are not pumping. The Kilgore area's five pumpers are all located on the east edge of the field, where sand conditions are poor.

Pumping wells in the Kilgore area are: Magnolia Petroleum Company's Dick Wells 2 and 5; Sinclair Oil & Gas Company's Mayfield 1; E. B. Madden et al's Mayfield 1; and East Texas Refining Company's Mayfield 1.

Approximately 25 of the flowing wells in the field have to be agitated regularly to maintain natural flow, while occasional agitation and swabbing of others required because of paraffin forming in tubing and reducing the output to less than the proration allowance. Arrival of cool weather and restriction of production to only 165 barrels daily per well have materially increased paraffin troubles for well owners.

East Texas Production Will Exceed Limit Middle of Week

Tyler, Texas.—Production in the East Texas field was scheduled to again ascend beyond the 400,000-barrel daily deadline tentatively set by the Texas Railroad Commission by the middle of the present week due to a continued heavy run of completions. There are in excess of 2450 completed wells in the field, but due to a number of pumpers not making their 165-barrel daily allowable, and about 25 dead wells in Rusk County, the total output daily is not in proportion to that indicated by total wells.

Operators are speculating as to what steps the commission will next take towards holding the output below the 400,000-barrel level. It is most certain that a reduction in daily allowable per well is to be included in the next order, and possibly a deeper cut than the 20-barrel reduction put into effect October 13, as sufficient field work is underway to boost the total number of completions to more than 2500 before the close of November.

The field is credited with having averaged 422,570 barrels daily from 2391 completed wells during the week ending October 14. This yield was divided as follows: Kilgore area 889 wells, 160,860 barrels; Joiner area 848 wells, 147,762 barrels; and Longview 644 wells, 113,948 barrels. A reduction will occur in the next weekly report due to the well allowance being cut from 185 to 165 barrels daily on October 13. During this same weekly period the trunk lines are credited with having moved a daily average of 362,975 barrels, and tank car shipments of crude increased to 8,322 barrels. Local refineries, numbering 12 on the active list, absorbed 16,150 barrels of the daily production.

Kilgore West Edge Well Goes to Danger Limit for Production

Longview, Texas.—Irregular sand conditions that prevail on the west edge of the Kilgore area forced Tidal Oil Company to carry its S. L. Dansby 1, W. P. Chism survey, Gregg County, to the danger zone for water in order to make a producer, although it is a north offset to an unusually large well. Dansby 1 swabbed dry repeatedly when tested after drilling deeper by stages, with first sand showing at 3686 feet. This well was completed from two feet of sand logged at 3745-47 feet, making the total depth 3324 feet below sea level, or within the danger zone for water. No attempt was made to obtain an open flow gauge because of the water hazard, but the flow is estimated at 200 barrels per hour on open tubing, or approximately a 10,000-barrel well. Merren & Mays' Dansby 1, a south offset, logged 11 feet of sand, with a total depth of 3712 feet, or 3311 feet sub sea depth, when completed in July flowing 150 barrels per hour through three-quarter-inch choke on tubing. No water has appeared in the latter well.

Humble Oil & Refining Company is reported to have released its C. C. Crews 760-acre lease, Leonard Perkins survey, Gregg County, rather than to drill an offset to Sun Oil Company's Walker 1, which is producing about 60 barrels fluid daily, including more than 50 per cent b. s. and water. This offset would be the best location on the Crews lease, which lies due west of the Sinclair-Cole lease that was exposed to severe drainage during the burning of Cole 1, with the water table advancing rapidly upon the producing area as a consequence.

Drill stem test made last week on P. H. Wilson, Marshall operator, and associates' J. C. Williford 1, located several miles northwest of production in Upshur County, yielded only salt water in Woodbine at 3780-3803 feet, or a total sub sea depth of 3373 feet, and orders have been issued to plug. This failure is located on a 100-acre lease, L. Gonzales survey. A survey made of the hole drilled by Daisy Oil & Gas Company's B. F. Phillips 1, P. Whitestone survey, and more than a mile northwest of production, has resulted in the sub sea depth being corrected back account of crooked hole. The log is reported to list Woodbine sand at 3716-3722 feet, or a sub sea total depth of 3327 feet. The corrected depth offers some chance of production being found above the water zone, and preparations are being made to set pipe and make a drill stem test.

New Unit Plan for Van If Trinity Proves Productive

Tyler, Texas.—Creation of a new unit plan of operation in case commercial oil and gas production is developed from the Trinity sand horizon in the Van field is provided for in the starting of the first deep test for the field this week. This deep test is to be drilled on northwest end of the structure, and on a lease already eliminated from Woodbine sand production possibilities by nearby dry holes, including the deepest in the field. Location has been made on the V. T. Davis 139.8-acre lease, Section 9, Nacogdoches County School Land Survey, which was contributed to the unit block by the Pure Oil Company. It will be 400 feet north of the most northern south line of the lease and 480 feet west of the east line of the survey.

The object of this deep test is to determine if the Trinity sand horizon is productive before the unit members surrender lease on a large amount of acreage lying outside the Woodbine sand producing area. Some of this acreage begins expiring in 1932, but ample time would be available to complete wells in the Trinity sand horizon should it prove productive before the leases expire. The Trinity sand test is located about 1200 feet northwest of Pure Oil Company's A. G. Tunnell 1, which failed to produce in the Woodbine after topping the Austin chalk at 2545 feet, and was abandoned last November at 3797 feet in hard black shale and sandy lime. The north end of the field has been pronounced the best bet for locating the deep test, based on careful study of sub-surface conditions. Unit members are financing this deep test, and a separate unit will be formed should a lower producing horizon be uncovered.

Tyler, Texas.—A ratio of about five barrels of salt water per barrel of net oil is now being produced by Humble Oil & Refining Company's 24 wells in the Boggy Creek field, located on the Anderson-Cherokee County line. During the week ending October 13 the field yielded about 925 barrels pipe line oil and 4625 barrels of salt water. The above company is the sole operator, and has been releasing surrounding leases because of the steady encroachment of water.

Austin, Texas.—The state reclamation department announced Tuesday, October 20, that it will make a topographic map of the Sabine river bed at a cost of $3000. Work is to begin November 1 and will be completed two months later.

Data procured will be placed at the disposal of all oil companies, but the primary purpose of the survey is to have a map ready at the time the recently enacted law will permit the leasing of the river bed for drilling purposes. Several new bench marks will be located in the area, which will be of benefit to oil men in determining sub-sea levels in wells in the area.

North and West Texas Field Notes

H. H. KING, ***Staff Representative, Fort Worth, Texas***

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Protest Filed on Allowable Set by Board for Yates Pool

Austin, Texas.—The first protests against the new field allowables set by the railroad commission appeared Tuesday, October 20, when Judge C. L. Black filed a protest against the 65,000-barrel allowable for the Yates pool. The petition was filed on behalf of Mid-Kansas Oil & Gas Company, Stanolind Oil & Gas Company, Shell Petroleum Corporation, Simms Oil Company and The California Company, but did not include Humble Oil & Refining Company which also operates in the field.

Officials of that company requested that the allowable be increased to 76,000 barrels or higher, contending that the evidence of Suman and Gregory, technical witness who appeared at the Yates hearing, tended to show that higher allowables than the present one would not cause waste in the field, but might possibly reduce waste by decreasing gas-oil ratios. They requested that the change be made without hearing on the evidence which has already been taken. It was indicated by commission officials, however, that they will probably hear a little more evidence before determining their course of action.

San Angelo, Texas.—Revised proration allowances assigned West Texas field effective 7 a.m. October 16 by the Texas Railroad Commission failed to include a uniform reduction of 10 per cent as tentatively scheduled at the conclusion of a hearing held in Austin earlier in the month. The Yates field was reduced only 5000 barrels, making the new allowable 65,000 barrels daily, while the Crane-Upton area got by with a nine per cent cut with the new quota fixed at 16,700 barrels daily, as compared to 18,323 barrels daily. Winkler County's allowance was cut from 48,000 to 40,000 barrels daily, but actual production is several thousand barrels below the latter figure. The Howard-Glasscock area was cut approximately 13.68 per cent, with the new quota fixed at 26,000 barrels daily, as compared to 30,171 barrels daily. Ector County was cut about 17 per cent, making the new allowable 6300 barrels daily.

Panhandle Ruling Stops Gas Use in Making Wells Flow

Amarillo, Texas.—Flowing oil wells in the Texas Panhandle in the future are destined to be scarce in the event the Texas Railroad Commission successfully enforces its new conservation order for this area made public October 17. In the past it has been a general practice among operators to utilize gas from the upper section of the lime to flow oil wells by setting the casing high, but the new rules require casing to be cemented not more than 25 feet above the top of the first gas horizon, and if the test is to be completed as an oil producer a second string of pipe must be cemented to effectively seal off the upper gas production.

Few oil producing properties in the area still retain sufficient reservoir pressure, or have ample gas production in the oil horizon, to yield natural flowing wells without the aid of the upper gas. This upper gas has served to jet the oil to the surface, and in the past has accounted for the bulk of the outstanding oil producers.

The commission has also ruled that operators will be allowed a maximum of three days to drill into and complete a gas well with the well flowing open. Wells requiring more time to complete, or to drill past the gas horizon must be equipped with control heads to curb the gas waste. Enforcement of this rule is expected to prevent the waste of billions of cubic feet of dry gas annually.

Elliott Assumes Charge of Proration in North Texas

Wichita Falls, Texas.—Assuming charge of proration enforcement in North Texas during the past week, J. T. Elliott, deputy supervisor of the oil and gas division of the Texas Railroad Commission, is to carry on his conservation duties as well as serving as umpire, with headquarters here. The district has been without a proration organization since the recent resignation of L. V. Hull, who was paid by the oil companies to serve as umpire until the recently enacted legislation cancelled such a method of proration enforcement, and requires umpires to be paid by the state. Elliott has been on duty for the past 3½ months as a deputy supervisor in East Texas, and prior to that assignment was in the Panhandle.

A revised production quota assigned North Texas by the commission limits production to 57,000 barrels daily, or 6000 barrels less than the former daily allowance. However, this reduction will not be felt by operators, as the district's actual production is averaging only about 55,000 barrels daily, with the output of some wells held back for better prices.

Outpost Test Is Started In Eastern Upshur County

Longview, Texas.—An outpost test is being started by Cranfill-Reynolds Company and associates in southeastern Upshur County and about 3½ miles due north of nearest oil production in the East Texas field. An active lease and royalty play has taken place within the past month, centering west of the Jamestown surface high, and extending north across Little Cypress Bayou, with lease bonuses advancing above $50 per acre. The test is to be drilled on the Rush farm, E. N. Eubanks Survey, being 330 feet from the south line of the lease, and 660 feet west of the northwest corner of the Brewster tract. Leon Russ, Dallas, and Harry Reynolds, Houston, have a working interest in the test and drilling block.

This wildcat play got its start through operators having correlated logs of recently completed failures in the east portion of Upshur County that revealed a rise in the structure after apparently dipping off at the present north end of the East Texas field. However, some operators contend that if production is obtained by the above outpost test that it will be a continuation of the original field, with a bottle neck opposite DeArmand et al's dry hole on the Charles Cobb 417-acre tract, M. Mann Survey. Others have refused to take an interest in the play because they hold to a theory that the Woodbine sand horizon is missing in the Jamestown area.

Jackson, Miss.—Ohio Oil Company is taking up a block of indeterminate size in Mobile County, Southwest Alabama, centering in Section 15-3s-2w. The acreage is being taken in the name of J. K. Kerr, vice president of Ohio Oil Company. More than 20 leases have been recorded, it is reported here.

South Texas Field Developments

EARL POST, ***Staff Representative, San Antonio, Texas***

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Bee County Discovery Well Is Most Important in South Texas

San Antonio, Texas.—Probably the most important discovery in South Texas this year was Buchanan and Lefevre's George A. Ray 1, John A. Williamson Survey, Bee County, which is estimated as a 2000-barrel producer at a total depth of 3908 feet. It is 2800 feet due east of Damac Oil Corporation's Ray 1, which opened a pool one mile southwest of the Pettus townsite during the summer.

Buchanan and Lefevre's Bee County wildcat Tuesday was flowing at the rate of 63 barrels per hour through tubing without chokes, with little water showing. The water is believed to be from drilling fluid and is diminishing. The flow is by heads every six hours but comes back strong after swabbing.

The test likely is the key well to the pools of the Pettus district and will lead to the drilling of a great deal of questionable territory. It is about 3600 feet due south of production in the Cosden pool, west of Pettus townsite, and possibly connects with that pool. It also is considered a western extension to the Damac pool. The drilling of several salt water wells and dry holes between the Cosden pool and the old field and between the Damac pool and the townsite further indicates a separate trend to the north and south. Sun Oil Company and Batex Petroleum Corporation have gassers on the southern portions of the leases, indicating a fault through this corner of the Cosden pool. If this is the case, the general decline of formations might account for the fact that the new Buchanan and Lefevre well is 200 feet lower than the wells in that field.

In any event it can be said that this well is showing up better than any yet drilled in the field. It registered a heavy pressure and was increasing its flow steadily.

It is interesting to note that the well took 20 feet of formation without showing any signs of salt water. The first 15 feet of sand were highly saturated and the remainder was hard and dry. The well topped the sand at 3888 feet and was sunk to a total depth of 3908 feet; elevation is 342 feet.

The exact location of the well is 3154 feet from the east line and 150 feet from the north line of the John A. Williamson Survey.

The Buchanan and Lefevre well, figuring elevations, topped the pay 45 feet higher than did Damac Oil Corporation's Ray 1, discovery well, located 2500 feet to the east. The Damac well had the sand at 3920-25 feet and was completed for 300 barrels on a 20/64-inch choke, estimated at 1000 barrels open flow initially.

T. B. Slick Estate's George Ray, 670 feet north of the Damac well, is believed to be in the edge of a fault probably cutting off the Pettus townsite pool, one mile to the northeast, from the Damac pool. This test topped the sand at 3931 feet and was drilled to 3939 feet, where two drill stem tests failed. The top of the formation was so encouraging that 6⅝-inch casing was set to test. The well was swabbed in, being practically dry and no pressure showing, and was then cored to 4135 feet and abandoned.

The new producer brings the Pettus district to the front as probably the most promising in South Texas. The Pettus field has never been known as an area of big flush wells, few completions in the older districts of the field having shown more than 1000 barrels flush, but the wells have demonstrated that the sand has the quality of longevity and the field has never been troubled with water encroachment. Conditions are said to be very favorable for large ultimate recovery per acre and several wells on and near the Pettus townsite have already showed a recovery per acre of around 20,000 barrels and at least one has already a recovery of approximately 40,000 barrels per acre, while the field is still less than two years old.

It is considered very likely now that other wells will get started immediately in the area around the Buchanan and Lefevre well. Probably one of the first to get under way will be H. H. Weinert, who holds the lease on a 10-acre tract out of the Ray ranch, about midway between the Damac discovery well and the Buchanan and Lefevre well to the southwest.

It is quite likely The Texas Company may start operations at once, or at least at an early date, on its Grammell tract which is a north offset to the 100 acres of Buchanan and Lefevre, though the new well does not offset Texas acreage.

Also the T. B. Slick Estate has considerable acreage that is thrown in a rather favorable light by the Buchanan and Lefevre well and on to the southwest approximately a half mile and across the creek is the Imogene Hall tract which is held under lease by Humble Oil & Refining Company.

To the northeast of the Pettus discovery pool, United Production Company's Ray 39, T. Hanson Survey, is drilling at 6490 feet.

Humble Oil & Refining Company's Thompson 1, in southeastern Bee County, is drilling around 2140 feet.

Mirando District Production 406,631 Barrels in September

San Antonio, Texas.—Nine hundred thirty-eight wells accounted for 406,631 barrels oil production in the Mirando district during September. This was an average of 13,584 barrels daily or 14.4 barrels per well. The Mirando district included Webb, Zapata, Duval and Jim Hogg Counties.

The Schoolfield & O'Byrne field of Duval County, with 54 producing oil wells, led in production during September with 149,697 barrels; the Muckelroy extension of the Jennings field of Zapata County came second with 139 wells making total monthly runs of 71,731 barrels; the Cuellar extension of the Jennings field of Zapata County was third

with 59 wells making a total of 53,307 barrels; the Cole field of Webb County was fourth with 64 wells making 36,949 barrels; and the old Aviator field of Webb County with 126 wells, was fifth with 23,479 barrels. The other 13 fields of the district made monthly runs less than 20,000 barrels each, from the Randado field of Jim Hogg County with 137 wells making total monthly production of 19,169 barrels, down to Alworth field of Zapata County with five wells making a total of 280 barrels during the month of September.

The grand total runs of oil of all fields during the life of the Mirando district was placed at 29,493,790 barrels.

Runs made during September by the seven pipe line concerns of the Mirando district showed Magnolia Pipe Line Company, from a total of 420 wells, made runs totaling 204,158 barrels; Humble Pipe Line Company, from 327 wells, made runs totaling 146,646 barrels; Texpata Pipe Line Company, from 84 wells, made runs totaling 26,096 barrels; Crown Central Petroleum Company, from 64 wells, made runs totaling 15,724 barrels; Houston Pipe Line Company, from 37 wells, made runs totaling 10,188 barrels; Carolina-Texas Pipe Line Company, from six wells, made runs totaling 3817 barrels, and Laredo Pipe Line Company made no runs in September.

New Oil Structure East of Cole Gas Field Is Proven

San Antonio, Texas.—A new oil structure, just east of the Cole gas field, Duval County, was definitely proven when Cole Petroleum Company's Benavides 70 was completed for an initial flow of 100 barrels from the sand at 1730-36 feet. The well is 300 feet east of Benavides 39, which was completed four years ago as a large gasser, but started spraying oil several weeks ago in such quantities that it had to be taken off the line. The new producer found the sand several feet lower than the 39.

The Benavides 70 is 360 feet from the northeast line and 660 feet from the northwest line, Block 8, Survey 19, Cole subdivision, Mariano Arispe Grant. A location has been made for Benavides 71 and the derrick is being skidded. It is 365 feet from the southeast line and 442 feet from the northeast line.

In the same district of Duval County, United Production Company completed Benavides 1-E, Survey 173, for an initial flow of 35,000,000 cubic feet of gas with 1000 pounds rock pressure. The sand is logged at 2433-38 feet with the total depth at 2451 feet.

A gasser was completed in the Webb County section of the Cole field; it was O. W. Killam's Bruni 21, Survey 8, Mariano Arispe Grant, which is making 10,000,000 cubic feet of gas with 625 pounds rock pressure from 2307-12 feet. Derrick is up for the same operator's Bruni 22 in Survey 9 of the same county.

San Antonio, Texas.—F. H. Etheridge's Jose Bustamante et al 1, in the southwestern portion of the Muckelroy extension of the Jennings field, Zapata County, is in process of completion after testing 14 trebles of pure oil in 8½ minutes. The well had the sand at 1475-77 feet after going through three feet of caprock topped at 1472 feet. Casing is set at 1473 feet.

This well is 640 feet from the northeast line and 150 feet from the northwest line of the Sun Oil Company's 80-acre tract in share 35, Fansler partition of the Comitas Grant. It is 2500 feet southwest of the Bateman well, which was completed in May for an initial flow of 270 barrels, opening a new sand and pool for this immediate area.

Another Guadalupe County Crevice Gusher Expected

San Antonio, Texas.—Another crevice gusher seems probable in wildcat territory of Guadalupe County, 2500 feet due south of the Camp pool, Darst Creek. John F. Camp's Dan J. Denman 1, after topping the Austin chalk at 2256 feet, unusually low, went into a crevice at 2400 feet. On a drill stem test, the well showed a hole full of very high gravity oil for that district on a one-fourth-inch choke in 10 minutes. The test was stopped when the well threatened to blow out. The well is 450 feet from the west line and 150 feet from the north line of a 50-acre tract in the William Arrington Survey.

Casing has been set in the test on top of the crevice and preparations are being made to drill it in. The cement has been given about twice as much time to set as ordinarily as a precaution against a blow-out or a damaged hole in the completion.

The well was logging very low in comparison with Humble Oil & Refining Company's Denman 1-C, producer in the Camp pool, which got this formation at 2145 feet or 111 feet higher than the Camp well, disregarding elevations. The formations are very freakish in this particular area, however, as the Camp-Denman discovery well, a 6000-barrel producer, faulted out all formations between the Taylor marl and the Edwards lime, while the offset ran regular.

Nine hundred feet south of the two producers and between the Camp wildcat and the pool, Humble Oil & Refining Company's Dan Denman 1 topped the chalk at 2214 feet and is drilling ahead, not looking so very promising. It may hit the crevice or fault out some lower formations and still make a producer.

Test Near Sinton in Welder Gas Area Has Good Showing

San Antonio, Texas.—Welder Oil Corporation's Welder 3, northeast of the town of Sinton and in the gas area which was opened up several months ago by Aransas Oil Company, topped the gas sand at 3651 feet and drilled sand to 3671 feet. On drill stem test it showed 1100 pounds pressure in 12 minutes. The well also showed a trace of salt water from the bottom of the hole. At present the well is shut in without casing being set. Indications were said to be the well would not be brought in now unless arrangements could be made for immediate connections and sale of the gas.

San Antonio, Texas.—Ralph Ogden's Mrs. Sue Nealson 1, in the Larrimore pool, Caldwell County, tested a little oil and sulphur water in the Edwards lime, topped at 1297 feet and drilled to 1299 feet. It is being cored several feet deeper and will be tested again. The well is practically surrounded by producers of very low gravity oil, which is used by M. K. & T. railroad for fuel. The well is on a 200-acre tract in the John B. Gray Survey, three miles north of Lockhart.

San Antonio, Texas.—Stanolind Oil & Gas Company and John F. Camp's Pettus 2, 1589 feet north and 64 degrees west of Pettus 1, Goliad County, has reached a depth of 4220 feet and is in ratholing. Pettus 1, also located in the Maria de Jesus Ybarbo Survey, near the town of Charco, made a small oil and gas well at 4282-86 feet, opening a new pool.

Gulf Coast Field Developments

JACK LOGAN, ***Staff Representative, Houston, Texas***

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Two Thompson Dome Prospect Wildcats Are Flowing Oil

Houston.—Two of the three tests of the Thompson dome prospect in Fort Bend County being drilled by Cullen and West and Gulf Production Company are flowing oil and a third tested salt water at 3500 feet.

George 2, located 600 feet east of the original George 1 wildcat, was flowing 600 barrels per day at latest reports. The oil was coming from a total depth of about 5175 feet, out of a sand topped at about 5125 feet.

Their Lockwood-Sharp 2-A was reported at the same time to be flowing 150 barrels per day from a total depth of about 5100 feet, while Lockwood-Sharp 3-A was flowing salt water from 3500 feet. This latter test, located 600 feet east of 2-A, tested 1400 pounds of dry gas through a quarter-inch choke at about 3140 feet early in October, and a decision was made to drill it deeper. Nothing was encountered between 3140 and the present depth but a sand with an odor of oil at about 3155 feet.

Second Citrus Grove Prospect Wildcat Is Preparing to Spud

Houston.—Preparations are being made to spud Harvey Smith's Boker 1 in Matagorda County, October 23. This wildcat will test the Citrus Grove prospect located about seven miles west of Big Hill sulphur dome and near the Boker 1 test drilled in Lot 14 of the J. V. Criswell Survey in 1930 by Empire Gas & Fuel Company. Smith's Boker 1 is in Lot 15 of the same survey. The older wildcat was abandoned after having encountered a show of gas at 6250 feet. Citrus Grove prospect was discovered with the torsion balance in 1930 by Cockburn Oil Corporation.

A second Matagorda County wildcat, United North and South Oil Company's Stoddard 1, is drilling at about 1200 feet after having set 10-inch casing at 1150 feet. Stoddard 1 is located 150 feet west and 545 feet north of the southeast corner of Lot 53 of the Buckeye Townsite, J. C. Keller Survey.

Announce Three Completions In Chambers County This Week

Houston.—Three completions, two of them commercially successful wells in Barbers Hill field, were announced for Chambers County this week.

Gulf Production Company completed J. F. Wilburn 5 at Barbers Hill at 4494 feet for an initial production of 1400 barrels of 25.5 gravity oil after having set 50 feet of 4½-inch screen. The well has a pressure of 400 pounds on two three-eighths-inch chokes.

McAlbert Oil Company, operating in the same field, completed Wilburn 4 at 4470 feet for an initial estimated at 2400 barrels of 24 gravity oil after having set about 45 feet of screen. This well topped the salt at 1410 feet and went through it at about 2415 feet.

The third completion for Chambers County was a semi-wildcat of the Texas Gulf Sulphur Company at Moss Bluff. This company abandoned Carter 4 at about 1776 feet.

Incidentally it is not improbable that two additional wells will be completed at Barbers Hill before the close of October. Sun Oil Company has set seven-inch casing in O. H. Winfree 2 at 5130 feet a depth at which a sandy shale showing oil was encountered. Humphreys Corporation's (Nat Hunter Producing Company) E. H. Winfree 6 is preparing to pump at 5620 feet.

Two Locations Boost Wildcat Activities in Austin County

Houston.—Wildcat activity in Austin County was given a boost this week by announcement of two locations on which drilling is scheduled to start in November.

O'Hara et al will drill a wildcat test 650 feet north of Schroeder 1 in the M. J. Cummins Hacienda, five miles southeast of Bellville. A derrick has been built on the location which will be known as F. Nelius 1. Pomical and Bolteka have announced intention of drilling F. Schbajsa 1 on a location 329 feet north and 78 degrees east of the northeast corner of the B. Dougherty tract in the S. F. Austin Four Leagues Survey, three miles south of Bleiblerville.

Parmesan and Cafferkey, drilling William Scholechte 1, 2½ miles north of Kanny in the Fitzgerald Survey, have been shut down at 1500 feet since the latter part of June.

Milam County Wildcat Test Is Drilling at 4700 Feet

Houston.—The wildcat test J. A. Foster 1, being drilled by C. M. Joiner on a location in the A. G. Perry Survey, 12 miles south of Cameron in Milam County, was drilling at about 4700 feet this week after having successfully completed a side-tracking job slightly below 4000 feet.

This well had an elevation of 375 feet. With this key, it logged the Pecan Gap chalk at 3237-3408 feet, the Austin chalk at 4410-4575 feet, and later twisted off the drill stem in the Eagleford shale at 4693 feet.

Three other wildcat tests in Milam County: Diltex Oil Company's E. Lawson 1, Nolan et al's Beard 1, and H. W. Elliott's Marek 1, are all shut down.

Second Test of Manvel Field Is Yet to Spud

Houston.—Although production on The Texas Company's Belcher 1, wildcat discovery well of Manvel field, in Brazoria County, about 14 miles south of Houston, has again dropped to 162 barrels per day, despite working the well over, the status of Belcher 2, located 1000 feet southeast of the discovery well after its completion, is still that of an unrigged derrick.

Belcher 1, it will be remembered, was completed early in September at 5481 feet for an initial production of 2000 barrels of pipe line oil. This gradually dwindled to 119 barrels per day, when the well sanded up. Belcher 1 was worked over by

drilling it three feet deeper. It is located in the Harry Little Survey.

Another Brazoria County wildcat test which is being watched with interest is United Oil Syndicate's Levitt 1, three miles north of Danbury in the John Peske Survey. This test is pulling on a stuck drill stem with hydraulic jacks after having pulled in the crown block while trying to dislodge the stuck casing at a time when the test was nearly 1600 feet deep.

Two Burleson County Tests Drilling Ahead

Houston.—Two of the three wildcat tests being made in Burleson County are actively drilling while a third is shut down preparatory to testing a water sand.

Marek and Sons' A. Marek 3, located 1068 feet north and 225 feet west of the southeast corner of the Marek tract in the N. McFaddin Survey, 2½ miles southwest of the town of Tunis, is drilling near 1640 feet in shale. Marts et al's Boyett 1, located five miles southeast of Wellbourne, at latest reports was drilling at about 2950 feet in a hard sand. Mid-South Oil Company's Duckworth 1, located near Clay Station, was shut down at 3070 feet to test a water sand.

Houston.—Yount-Lee Oil Company's Cade 22 at High Island, Galveston County is showing oil in a hard sand encountered at 4990-5020 feet after having drilled through a layer of anhydrite encountered around 3000 feet. Cade 23, another well of the same operator on High Island, is drilling below 3355 feet. Both wells are located on a lease taken over from Gulf Production Company by the Yount-Lee organization.

Houston.—Rianjo Oil Company's Cuthrell 2, Grimes County wildcat three miles east of the town of Carlos, is shut down with a show of gas found in lime rock at about 2930 feet. This test is 1831 feet from the west and 974 feet from the north line of the Pat O'Connor Survey, in the center of an 100-acre tract.

Houston.—Ginter et al's Neil Wells 1, Nacogdoches County wildcat, is drilling ahead near the 3400-foot depth in a sandy shale after a drill stem test at 3278 feet showed salt water. This well, located 15 miles southeast of Nacogdoches in the M. H. Chireno Survey, tested a sand at 3001-3009 feet which also turned out to be a salt water sand.

Dominguez Producer Shows Larger Output on Deepening

Los Angeles.—Union Oil Company's Carson 4, the Dominguez producer which was recently deepened from 4448 feet to 4766 feet, has increased its production to 2250 barrels of clean oil through a single bean and established the field as a good potential producer in a zone only slightly deeper than the shallower sand more intensively developed a few years ago. With a tubing pressure of 150 pounds and a casing pressure of 750 pounds, the well has been flowing steadily while establishing a potential. The company has three more wells to be completed soon in this zone and Shell Oil Company is deepening two wells to produce from this formation. Associated Oil Company completed a good well at 4665 feet earlier in the year.

The Dominguez field is closely held by Shell Oil Company, Union Oil Company and Associated Oil Company and has often been cited as the ideally developed district. Gas was injected into the upper formations for two or three years, but this practice was stopped after there was some doubt as to the wisdom of the operation.

Standard of California Offers Reward for Evasion Information

San Francisco.—The reward of $1000, offered a week ago by Standard Oil Company of California for information leading to the arrest and conviction of any person or persons found guilty of unlawfully evading the payment of California gasoline taxes, has attracted wide attention and may lead to exposures where such practices have been suspected. The company has run large advertisements in the leading daily papers, urging the presentation of such information as may lead to arrests and convictions. The advertisement reads in part:

"In the past the state of California has been defrauded on a vast scale by evasion of the gasoline tax law. It is currently and persistently charged that this condition continues and that new frauds are being perpetrated on a large scale despite provisions of the new law which became effective April 1, 1931. These tax frauds have been an important contributing factor to the price wars and the ensuing depression from which the oil industry has suffered. The tax of three cents a gallon is such a large part of the price that the failure to pay affords a margin which permits those who steal the tax to sell gasoline at prices ruinous and destructive to the honest distributor. The dumping of quantities of untaxed gasoline in the market, in competition with gasoline lawfully carrying the three-cent tax, provides unfair and intolerable competition to the law abiding distributors who pay the tax to the state, and to thousands of their dealers who sell to the consumer gasoline on which the tax is paid, at prices which include this tax. This condition, if not remedied, threatens again to demoralize the oil industry of California, to the detriment of the general welfare of the state, and of labor and capital alike, as well as to reduce the revenues that lawfully belong to the state.

"The sale of gasoline at less than the prices for which it is generally sold is not in itself evidence of tax evasion. While all who sell gasoline for less than the prices generally prevailing do not evade the tax to conspire in its evasion, tax evasion results in price-cutting.

"The methods of those engaged in criminal evasion of the gasoline tax law are numerous. The opportunity to cheat the state starts at the mouth of the oil well and terminates only with the delivery of the gasoline to the consumer. The ways of the "gas tax racketeers" are devious, and evidence of their illegal activities is difficult to obtain.

"The Standard Oil Company of California, in the interest of the whole industry and of good citizenship, and for the protection of its many dealer customers who must compete with cut-price tax-free gasoline, believes it should do everything in its power to assist the state authorities in detecting and putting an end to the evil that exists."

The advertisements state that information should be presented in writing or in person to J. S. Casey, chief of the state division of weights and measures, or to various sealers of weights in separate counties. The identity of persons co-operating in the enforcement of the law by giving information will be held confidential and their participation will not be revealed at any time.

Denver, Colo.—A geophysical survey of several districts in the Rocky Mountain region, particularly in Wyoming, is to be undertaken by Midwest Refining Company, which is at present negotiating with contractors for the work. Most of the work, it is understood, will be in Northeastern Colorado and Central Wyoming. Possibly some of the work will be started this fall.

Louisiana--Arkansas Field Notes

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Sabine Parish Wildcat Gets Good Oil Show When Bailed

Shreveport.—Langbridge Oil Corporation's Stephens 1, SE NE Section 17-9-11, a wildcat in Sabine Parish, almost midway between the Zwolle and Pleasant Hill oil fields, was bailed during the last week at 3626 feet and made two heads of 39.1 gravity oil, aggregating 25 barrels, through the 6⅝-inch casing which was cemented at 3176 feet after drill stem tests at 3360 and 3380 feet had shown oil; elevation is 303 feet.

An analysis made from a half gallon of oil showed the following content: gasoline, 28.6; kerosene, 25.6; gas oil, 34.0; residue, 9.8; loss, 2.0. The oil is different in gravity from both the Zwolle and Pleasant Hill oils, both of which average above 40 gravity and have different analyses.

This test is about five miles south of Pleasant Hill and seven miles north of Zwolle production. Langbridge Oil corporation has a block of approximately 4200 acres surrounding the well. Stockholders in this firm are J. M. Bridges of Pleasant Hill, Louisiana; H. B. Langford, Shreveport; Frankie Foster, Kilgore, Texas, and Pugh and Hickman of Shreveport.

Sabine Parish Well May Become Zwolle's First 6000-Foot Test

Shreveport.—Loring Oil Company may make Bowman-Hicks 18, SW NW Section 15-7-12, Sabine Parish, Louisiana, the first 6000-foot test for the Zwolle field. Several tests have been started to this depth by this company in and around Zwolle, but none has gone as far as 5000 feet. Bowman-Hicks 18 is now well below base of the Zwolle chalk, making hole at 3700 feet in shale late last week. Bowman-Hicks 19, SW NE Section 16-7-12, was abandoned as a dry hole last week still in chalk at 2975 feet. It was expected one of these tests would be a deep one.

Shreveport.—Exchange Petroleum Company has abandoned White Grandin 1, NE SW Section 29-3n-7w, Vernon Parish, Louisiana, south of the Sabine Uplift, as a dry hole at 2722 feet in sandy shale; elevation was 292 feet. This wildcat was drilled on a block of approximately 10,000 acres held in this parish by three or four lumber companies, the block being mostly cut-over land. No immediate plans have been made for another test, company officials said.

Southwest Zwolle Test Now Dead, to Be Standardized

Shreveport.—Coates Petroleum Company's Sabine B-1, SW NW NW Section 1-7-12, southeast Zwolle, which on October 9 was completed as an oil producer, flowing 100 barrels of oil for the first three hours through 28/64-inch choke with 75 pounds pressure, flowed 500 barrels of oil daily for two days and then went dead. The hole is now standing full of fluid with 500 feet of salt water. It probably will be standardized; total depth is 2302 feet.

Three new locations were made in Zwolle last week. Gerhig Company of Tulsa, Oklahoma, in which James W. Gerard is interested, has taken over a 605-acre block from Hudson and Bird, who recently acquired the acreage from Louisiana Petroleum Company, and derrick is up for W. F. Skinner 1, NW NW Section 16-8-11, W. M. Coates is drilling contractor. The consideration Gerhig Company paid was said to be $20,000 from first half of the oil. The location was made by H. D. Easton, discovering geologist of the Zwolle field.

Ohio Oil Company is rigging up for Bowman-Hicks 12, NE NE Section 2-7-12, and O. J. Baird has derrick up for Duggan 1, SE NW SE Section 14-7-11. Stovall Gas Company has rig up for Howard 2, Section 32-20-3e, Union Parish, in the proven Monroe gas field, and Pelican Natural Gas Company has renewed location for Alexander 1, Section 4-16-6e, Richland Parish gas field.

United Gas Completes Sixth Producer in Sugar Creek Area

Shreveport.—United Gas Public Service Company last week completed the sixth gas producer for the Sugar Creek field of Claiborne Parish, Louisiana, where a gas with a high gasoline content is found in the upper Trinity zone. The new gasser, Treadwell and Hawks 1, center of northwest quarter Section 6-19-5w, gauged 29,000,000 feet of gas with 1615 pounds pressure, at 4380 feet in porous sandy lime. Sand was topped at 4355 feet; nine-inch casing was cemented at 4225 feet; 12½-inch casing was set at 1517 feet. This gasser, as were all former gassers in the field, was brought in through tubing.

The new gasser is a fourth of a mile northwest of other gas production. The 8000-acre block surrounding these six gassers is owned equally by United Gas Public Service Company, Standard Oil Company of Louisiana, and Triangle Drilling Company. It is being developed on a unitization plan.

S. S. Meek, Trustee's, Wagner 1, SE SE Section 5-12-14, eight miles southwest of the lenticular Woodbine oil field, in De Soto Parish, was abandoned as a dry hole at 3104 feet in shale.

El Dorado, Ark.—Root Refining Company has leased one 55,000-barrel tank on its tank farm in Section 7-16-15, to Hollyfield and McFarlane, who will transfer approximately 30,000 barrels of Smackover oil they have in earthen storage in Section 13-15-16.

Henry Cross will hereafter run the oil from two of Texas and Pacific Coal & Oil Company's leases in Section 31 and 32-15-15, amounting to 125 barrels daily, which has heretofore been run by McMillian Petroleum Company.

Two Locations Are Announced In Arkansas During Past Week

Shreveport.—Two new locations were announced during the last week in Arkansas, one in Ouachita County, Smackover field, and the other for the north offshoot of the Urbana district of Union County. In Section 3-18-13, M. S. & M. Oil Company has rig up for Arnold and Doyle 4, SW SE Section 23-15-15, Ouachita County. Wilson and Chapman, who recently completed Henry Norman 1, Section 3-18-13, which gauged 940 barrels of oil in 24 hours despite leaking tanks and connections and is believed to be good for over 1000 barrels daily flowing through casing, have derrick up for A. H. Handley B-1, SE NW Section

3-18-13. The same company's A. H. Handley 1, in the same section, was put on the beam during the last week and gauged 47 barrels of oil and eight barrels of salt water daily, at total depth of 3570 feet.

On Saturday, October 17, Lion Oil Refining Company and associates were drilling at 5946 feet in sticky shale and hard lime with sticky streaks in Guy P. Hayes A-9, NE NE Section 4-16-15, Union County, Smackover's first 6000-foot test.

In Dallas County, Zepp Oil and Gas Company last week cemented six-inch casing on bottom at 2620 feet in chalk rock, in W. E. Hillman 2, SE NE Section 20-10-13.

Jackson Gas Field Records One Gasser and a Location

Jackson, Miss.—One gasser and one new location comprised the chief interest during the last week in the Jackson gas field. Meredith Drilling Company's Williams 1, SE SW Section 12-5-1e, Rankin County, in the southeast part of the field, was completed at 2375 feet in Midway chalk gauging 30,708,000 cubic feet of gas. Black shale was topped at 2306 feet and chalk at 2371 feet. Elevation is approximately 269 feet.

United Gas Public Service Company will take gas from Millsaps College's Fee 1, Section 34-6-1e, Hinds County, location for which was made during the last week. The college which has a campus of more than 100 acres in the city limits of Jackson and within the proven gas area is drilling the test in its own name but has contract to sell United Gas Public Service Company the production.

Stauffer and Koury, Trustees, have derrick up for Bond 1, SE NE Section 18-2n-14w, Lamar County, Southwest Central Mississippi, several miles west of Purvis, the county seat. P. B. Williamson of Houston, Texas, is said to have done the geological and geophysical work on this block.

Central Mississippi Wildcat Hits Oil Sand at 3675 Feet

Jackson, Miss.—Gulf Refining Company's Long Bell Lumber Company A-1, SW SW 10-2n-16e, Clarke County, East Central Mississippi, near the Alabama line, encountered a sand in the upper Eutaw that showed a saturation of heavy oil last week and reaming is under way preparatory to setting 6⅝-inch casing at 3675 feet, total depth being 3700 feet; elevation is 380.3 feet. The sand which showed the oil was brown and green. Due to the fact that Lauderdale Oil and Gas Company's wildcat test in Lauderdale County, Mississippi, approximately 50 miles to the north had a show of oil at top of the Eutaw, this showing of oil in the same horizon down the dip is of added interest. Long Bell Lumber Company A-1 topped black shale at 2290 feet and topped Selma chalk at 2633 feet; 15½-inch surface casing was set and 10-inch casing was cemented at 956 feet.

Jackson, Miss.—Arkansas-Louisiana Pipe Line Company last week abandoned Brandon Halls Farms, Incorporated, 1, Section 32-8n-1w, Adams County, Southwest Mississippi, near Natchez, as a dry hole at total depth of 4510 feet in Cane River shale; elevation was 282 feet. This test checked approximately 300 feet lower at top of the Vicksburg than a test to about the same depth drilled several months ago by A. C. Glassell and associates in Stowers 1, Section 29-8n-2w, Adams County. Arkansas-Louisiana Pipe Line Company's test topped Vicksburg at 1550 feet and topped the Sparta at 2920 feet.

Rankin County, Mississippi, Test Shows Salt at 2523 Feet

Jackson, Miss.—United Gas Public Service Company's McLaurin A-1, NE SE Section 8-5-2e, Rankin County, 1½ miles east of southeast Jackson's gas production, which gave indications a fortnight ago that it might make a commercial gasser, during the last week, showed salt water. The six and five-eighths-inch casing was stuck at 2493 feet while being run and was not cemented. The well was then drilled back to bottom at 2523 feet and tested with gas pressure when it showed salt water which rose to within 100 feet of the top with no gas showing. Hole was then made to 2528 feet, still in chalk, and a test made through the drill stem with packer with nothing showing but three joints of mud. At 2533 feet a drill stem test showed 22 thribbles of salt water in 15 minutes. Other breaks in the chalk will be tested. Elevation is 284 feet.

United Gas Public Service Company's Tchula Store 1, Section 33-15n-3e, Warren County, Mississippi, tested 1400 feet of water, in a drill stem test from 2075 to 2091 feet in the Sparta. The test later was reported coring for the contact of the Cane River, at 2274 feet. Elevation is 83.8 feet. Claiborne was topped at 725 feet.

Empire Lease and Royalty Takes Over Pandem Oil Corporation

Los Angeles.—Announcement was made this week by Sam W. Mellon, president of Empire Lease and Royalty Company of Los Angeles, that his company has acquired control of Pandem Oil Corporation, operating in Texas and Oklahoma. Empire Lease and Royalty Company conveyed to the latter company a half interest in its holdings in Kettleman Hills North Dome, consisting of 120 acres, of which 100 acres has been admitted to proration in the North Dome Association. In addition it sold a tenth interest in its leasehold interests in 10 western states, this interest having been appraised at $300,000. In return Pandem Oil Corporation sold to the former 1,107,097 shares of its capital stock, representing a controlling interest.

Under Empire management a new board of directors of the latter company has been elected with Oras S. Shaw of Tulsa as president. Operating headquarters of the company have been moved from Wichita Falls to Tulsa.

Pandem Oil Corporation last year drilled 17 wells in Texas, of which 11 were producers. The stock of the company has been listed on the New York and Chicago curb exchanges since 1925.

Shelby County, Texas, Test Now Drilling at 2460 Feet

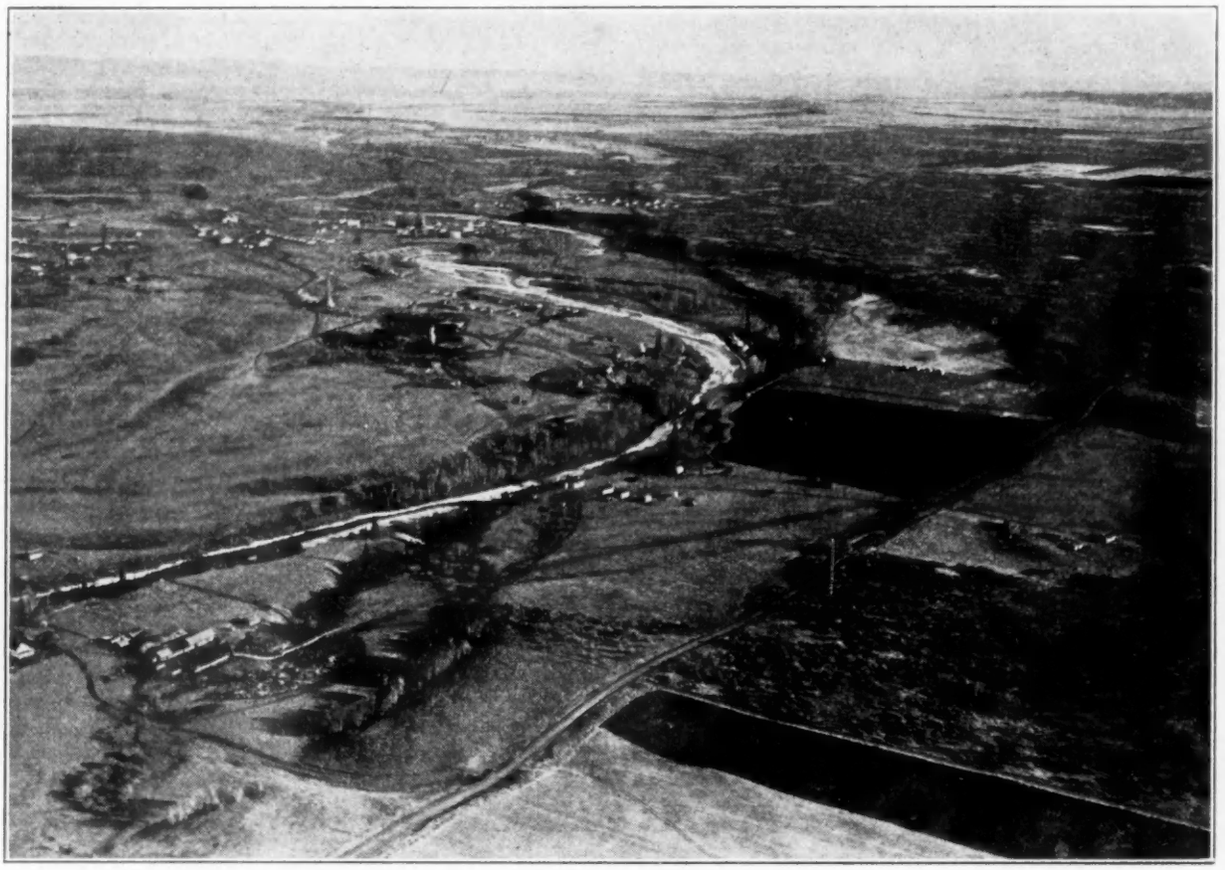
Marshall, Texas.—McRobie and associates, who tested dry with a small show of gas at 2282 feet in chalk rock in Windham 1, William Leach Survey, Shelby County, are drilling ahead through liner, being still in chalk rock at 2460 feet, late last week; 8¼-inch casing was cemented at 1750 feet above the Nacatosh after a gas show.

E. L. Chapman has taken over Holt 2, Matthew Moore Survey, Shelby County, which has been under way for more than two years by Chaparral Oil Company. The test is still shut down at 3127 feet, after a sand core was taken some months ago.

Smith and associates abandoned Y. D. Carroll 1, J. A. Parker Survey, Shelby County, as a dry hole in lime at 3240 feet. Plans for installing a heavier rig to go deeper had been mentioned.

INTERNATIONAL PETROLEUM
IN REVIEW

ROY E. LEIGH, ***Foreign Editor, New York***



A part of the Turner Valley Field, Canada. Photo by W. J. Oliver, courtesy of C. C. McDermond, Maracaibo.

Colombia May Modify Petroleum Law

Bogota, Colombia.—The Colombian Congress, now in session, has been asked to consider a second bill for the modification of Law 37 of 1931, which is believed by land-owners, oil operators, and many legislators to fall somewhat short of the requirements of the situation which must be established if Colombia is to take rank among the important oil producing countries of the world. There are now two such bills before congress, one by Dr. Anibal Cardozo Gaitan, previously described in these columns, and another more lenient in its provisions recently submitted by Dr. Eduardo Lopez Pumarejo, a member of the house of representatives.

One clause of the latter bill provides for the inversion of the order of preference among bidders for government oil rights, as set forth in Paragraphs 1 and 2 of Article 16 of the present law. Dr. Lopez Pumarejo would give first preference to the owner of the soil and second to the first bidder furnishing proof of having made geological investigation, a revision which would go far toward unscrambling the existing situation whereunder first preference is denied to owners of surface rights.

It is also proposed to amend Article 20 of the law, which provides that "no exploitation concessionaire may restrict the production of petroleum of his undertaking to less than one-fourth of the maximum productive capacity of his wells, unless authorized so to do by permit of the government; . . . " The amendment changes this wording slightly so as to give to producers opportunity to establish productive capacities in accordance with technical and economic factors.

Article 10 of the law provides that "It shall be the duty of all petroleum exploiters to store . . . the petroleum accruing to the government for royalties or taxes." "Such storage shall be free of charge during one month, but during the three following months the government shall pay the exploiter at the rate of one centavo ($0.01) per month per barrel . . ." Dr. Lopez Pumarejo proposes that this storage charge payable by the government shall be increased to two cents per barrel.

There is indication that the government has rejected applications for additional acreage made by Tropical Oil Company, subsidiary of Imperial Oil, Ltd., and Carlos Davila, president of the Agricultural Mortgage Bank, of Bogota, while accepting those made by Union Colombiano, the Zuleta Angel group, and European Petroleum Company, of Paris.

▼ INTERNATIONAL PETROLEUM IN REVIEW ▼

American Exports Washington, D. C.—The influence of cheap crude in East Texas is making itself felt in export statistics; and the situation which obtained in the Gulf Coast market during the mid-summer period is expected to go far toward halting the general downward trend of American exports of petroleum and petroleum products. To state the matter more clearly, the possession of crude oils which could be sold at an average declared price of 68 to 82 cents per barrel (The lower figure represents the average of declared values reported during the month of August, 1931; the higher figure the average of values reported during the period January to August, inclusive, of 1931) has enabled American exporters to recapture or retain a portion of their export trade which otherwise most assuredly would have been lost to competing foreign producers.

By examination of statistics published by the United States Department of Commerce, crude oil exports during the first eight months of 1931 exceeded averages recorded during the same period of 1930 by more than 100,000 barrels per month. Shipments during August, for example, reached a total of 2,866,555 barrels and exceeded the total for August, last year, by 459,076 barrels. However, the larger volume of oil shipped in August of this year was worth only a little more than half as much as the smaller total of crude oil exported during August of last year. As a matter of fact, the average price per barrel realized during last August was less than half that reported during August, 1930.

Exports of refined products, however, have continued to decline, both in value and in volume.

Summarized figures are offered below:

AUGUST

	1930		1931	
Product	Quantity	Value	Quantity	Value
Crude petroleum	2,407,479	$3,477,561	2,866,555	$1,950,606
Refined oils	11,512,200	42,276,657	8,092,921	19,431,370

EIGHT MONTHS ENDING AUGUST—

1930		1931	
Quantity	Value	Quantity	Value
16,472,718	$22,734,979	17,339,461	$14,317,710
87,167,261	321,568,959	63,300,063	166,225,312

Venezuelan Production Off in September New York City—Michael O'Shaughnessy reports that Venezuelan production totalled 9,412,329 barrels during the month of September, 1931, as compared to a monthly total of 11,310,770 barrels recorded during September, 1930. Current output is divided among the several operating companies substantially as follows:

Company		Daily Average
Royal Dutch-Shell—		
Venezuelan Oil Concessions, Ltd.	87,890	
Caribbean Petroleum Company	31,734	
Colon Oil Corporation	21,433	141,057
Lago Petroleum Corporation		108,010
Venezuelan Gulf Oil Company		35,592
Creole Petroleum Corporation (S. O. N. J.)		23,835
British Controlled Oilfields, Ltd.		4,950
New York & Bermudez Company (General Asphalt)		300
Total Daily Average		313,744

Shipping Now Changed to Dollar Basis New York City—It is interesting and significant to note that tanker rates from the Gulf Coast to European ports are now being quoted in dollars and cents instead of in shillings and pence, as formerly. Thus shipping, a traditional stronghold of the pound sterling, has been changed to a dollar basis as a result of the discontinuance of the gold standard in Great Britain.

Chartering for October and November loading, from the Gulf Coast to the United Kingdom or the continent, has been reported at $2.185 per ton, or about 31 cents per barrel.

Cadman Discusses Diesel Engine New York City—"Compared with the simple non-condensing steam engine," says Sir John Cadman, "fitted in the ordinary coal-fired rail locomotive a Diesel engine on the same weight of fuel would haul a train no less than 10 times farther. . . .

"The average cost of producing one ton of flowing crude oil and bringing it to the surface of the earth may be estimated at one quarter of the expense entailed in mining and raising a ton of coal. That ratio will probably subsist for a number of years.

" . . . . Coal . . . . needs little preparation for the market; . . . . Oil, on the other hand, needs a complete range of treatment before it is available as a fuel. Moreover, by reason of the location of oil deposits in areas which are often distant from centres of consumption, the element of transport—and its cost—often bulks somewhat largely in the price paid by the consumer. Ultimately, therefore, petroleum products are more costly, for equal weights, than coal; and since their value in terms of heat is greater, a higher price has economic justification."

Orinoco's Test Down 4080 Feet Maracaibo, Venezuela.—Orinoco Oil Company, Venezuelan subsidiary of Pure Oil Company, is drilling below 4080 feet in its Netick 3, important wildcat test on the west side of Maracaibo Lake. Other wells drilled in its vicinity have yielded oil in small volume.

British Controlled Oilfields, Ltd., is sidetracking at 4932 feet in its deep test on the Buchivacoa Concession, northeast of the lake.

According to latest reports, only eight rigs are in operation in Western Venezuela. These include three by Venezuelan Oil Concessions, Ltd., at La Rosa and Concepcion; one by Caribbean Petroleum Company at Mene Grande; two by British Controlled Oilfields, Ltd., at El Mene; and one by Richmond Petroleum Company of Venezuela, subsidiary of the Standard Oil Company of California.

Mexico's All-Time Production Totals 1,619,527,638 Barrels Mexico City—The Bureau of Federal Statistics reports that Mexico has produced a total of 1,619,527,638 barrels of oil since the commencement of development in 1901, this including a total of 17,076,457 barrels produced during the first half of the current calendar year.

Peak of production was reached with a total of 194,755,710 barrels during the year 1921.

Completions for Past Week in U. S. Fields

▼ ▼ ▼

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
VENTURA COUNTY—		
Bardeen Pet. Co., Lanjershim 1B	125	1800
PLAYA DEL REY—		
Herndon Oil Co., No. 3	500	6335

OKLAHOMA

CREEK COUNTY—		
Magnolia Pet. Co., Talomasse 1, se nw ne 3-16-7e	*	2936
OKLAHOMA COUNTY—		
Slick Estate, Classen-Edwards 2, c w½ e½ se sw 3-11-3w (8hr)	10,990	6346
Slick Estate, Curtis 1, c w½ nw se nw 3-11-3w (8hr)	16,810	6340
Slick Estate, Terminal 1, ne nw se sw 3-11-3w (4hr)	5420	6546
OKMULGEE COUNTY—		
Shamblin and Smith, Sharp 1, esl se se 31-16-12e	20	2184
PAWNEE COUNTY—		
Arkansas Utility, Nielson 1, nw se sw 27-21-8e	¶5½	2179
Sherry et al, Milsap 1, se c sw 2-22-5e	*	3552
TULSA COUNTY—		
Mays Drlg. Co., Brooks 5, se c nw se nw 2-18-13e	10	2125
WAGONER COUNTY—		
F. D. Helshel, Apueka 2, sw c nw 6-17-15e	*	1390

KANSAS

COWLEY COUNTY—		
Smith et al, Wallace 1, se nw se 6-33-5e	*	660
ELLIS COUNTY—		
Gypsy Oil Co., Weiland 1 (owd), se c 36-12-16w	325	3014
GREENWOOD COUNTY—		
Phillips Pet. Co. et al, Beal 8, ne se ne 28-23-11e	200	1884
McPHERSON COUNTY—		
Darby Pet., Fletcher "C" 1, sw se sw 16-19-1w	¶28¾	2919
Darby Pet. et al, Kaegi 3, se c ne 20-19-1w	¶24	2906
Rosenthal et al, Knudson 1 (owd), sw c se 23-19-2w	¶8¾	50 2912
SEDGWICK COUNTY—		
Magnolia Pet. Co., Wheeler 6, ne c nw se ne 19-27-2e	700	3245
Van Marter, Lancaster and Davidson Houston 1, se sw nw 19-27-2e	*	1580
STEVENS COUNTY—		
McKnabb et al, Hallock 1, c sw 36-33-39w	¶10	2620
SUMNER COUNTY—		
G. W. Long et al, Rex 2, se nw se 22-33-3w	*	4548

EASTERN STATES

KENTUCKY

DAVIESS COUNTY—		
Hoosier Drilling Co., James Bros. 1	*	1186
HANCOCK COUNTY—		
Brewer & Thrasher, near Victoria, 1	¶1	....
Douglass Bolling & Co., Unknown 1.	¶1½	....
HENDERSON COUNTY—		
Imperial Oil & Gas Products Co., Freeman 1	20	....
Freeman 2	25	....
McLEAN COUNTY—		
Miller & Damron, Dunn 3	100	....
MUHLENBERG COUNTY—		
The Ohio Oil Co., Miller 1	¶¾	706
Ellis & Young, Lee 1	¶¾	682
Carey 1	¶1¾	685

MICHIGAN

ISABELLA COUNTY—		
E. Brown Development Co., Campbell 1	¶1¾	....
Mellon-Pollock Oil Co., Brief 1	750	....

For Tabulation and Comparison See Market Section

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
BRADFORD—		
Forest Oil Corp., Forest 1	2	....
Forest 2	2	....
South Penn Oil Co., 191	4	....
Melvin 243	2	....
Mrs. T. T. Fox, Franchot 1	5	....
Harding & Co., Wright 1	3	....
Ball & Ryan, O'Neil 1	3	....
Dieter Bros. Dieter 1	2	....
Freeman & Co., Freeman 42	4	....
CLARION-VENANGO FIELD—		
Rice & Thompson, Osmer 7	*	....
Samuel Gribble, Gribble 4	2	....
United Fuel Gas Co., Wise 4022	¶1	....
W. H. Masters & Co., Fye 2	8	....
CENTER-MIDDLE FIELD—		
Irvine Oil Co., Unknown 13	2	....
C. E. Potter, Irvine 1	2	....
Hoskins, Roeder & Co., Lot 3290, 91	2	....
GREENE COUNTY—		
J. B. Orndoff, Scott 1	10	303
BUTLER COUNTY—		
Ethridge & Co., West 6	¶¼	....
Charles J. Wilman, O'Dobbell 2	2	....
Little Holley & Co., Holly 2	¶¼	....

WEST VIRGINIA

BOONE COUNTY—		
Jones & Hess, Hill 1	*	1575
The Pure Oil Co., Federal Coal Co. 52	¶½	....
LEWIS COUNTY—		
Hope Construction & Refining Co., Crothers 1	*	2680
MARION COUNTY—		
Funk & Glover, Glover 3	*	3603
WAYNE COUNTY—		
Chartiere Oil Co., Ronk 2	1	....
WIRT COUNTY—		
F. O. Andrews, Rex 12	*	....
R. C. Waggoner & Co., Lieving 2	¶¼	2200

SOUTHEASTERN OHIO

MORGAN COUNTY—		
Ohio Fuel Gas Co., Boileau 1	¶¼	812

CENTRAL OHIO

BELMONT COUNTY—		
Bradfield & Hardwick, Burkhart 1	¶1¼	1035
Teller & Co., Rossiter 4	1	1829
FAIRFIELD COUNTY—		
City Natural Gas Works, Anderson Estate 5	¶¼	2302
KNOX COUNTY—		
Whitehill Oil Co., Allen 1	*	2963
LORAIN COUNTY—		
Ohio Fuel Gas Co., Cletzer 1	¶¼	....
MEDINA COUNTY—		
Edson & Co., Franks 27	50	500
Franks 28	*	....
Packard No. 1, tract 20	*	365
PERRY COUNTY—		
Atha Oil & Gas Co., Wilkins 1	¶¼	3020
RICHLAND COUNTY—		
Ohio Fuel Gas Co., Smoyer 1	¶¼	....
WAYNE COUNTY—		
Hulse & Kundtz, Inc., Firestone 3	*	3064

NEW YORK

ALLEGANY COUNTY—		
A. H. Ashworth, Ashworth 1	¶¼	....
Ryder-Richmond Oil Co., Fee 1	3	....
Fee 2	3	....
First National Bank of Boliver, Childs 18	6	....
Carrier & Co., Fee 1	3	....

NORTHWESTERN OHIO

Company, Well and Location	Initial Production Bbls.	Depth
HARDIN COUNTY—		
Wiser Oil Co. & Steiner 1	3	1376

INDIANA

DEARBORN COUNTY—		
Dearborn Dev. Synd., Schumacher 1	*	1987
HENRY COUNTY—		
Bert Kinnamon, Foster 1	¶¼	922
KNOX COUNTY—		
James H. Gardner, House 1	*	....
SPENCER COUNTY—		
I. A. Polhamus, Grass 1	*	....
SULLIVAN COUNTY—		
James C. Ellis, Drake 1	¶¼	....
C. W. Scott, C. L. Davis No. 2, tr. 5	*	....

MISSISSIPPI

RANKIN COUNTY, (Jackson)—		
Meredith Drilling Co., Allen-Williams 1, 12-5-1e	¶31¾	2374

None in proven areas of North Louisiana or Arkansas.

TEXAS

TEXAS GULF COAST

BARBERS HILL—		
McAlbert Oil Co., Wilbourn 4	2400	4470
Gulf Prod. Co., J. F. Wilburn 5	1400	4494
MOSS BLUFF—		
Texas Gulf Sulphur Co., Carter 4	*	1780

NORTH TEXAS

ARCHER COUNTY—		
R. P. Dorian et al, W. A. Liles 1	*	900
HARDEMAN COUNTY—		
Chiltex Oil Co., W. D. Berry 1	*	1638
THROCKMORTON COUNTY—		
Suncrest Oil Co., W. L. Everett 1	¶1¼	3352
WICHITA COUNTY—		
Geo. J. Procter et al, Spradling 1	*	1095
Schlaffke & Blair, W. B. Honaker 4	40	841
YOUNG COUNTY—		
Belknap Coal Co., Belknap (Sec. 22) 8	30	667
W. J. Junker et al, J. A. Winkler 1	*	2175
King Royalty Co. & Phillips Pet. Co., Larimore 25	65	720
Larimore 27	25	719
Kleiner & Riggs, Belknap (Sec. 22) 2-B	*	750
Geo. Mollenkoph et al, T. J. Routon (Sec. 243) 1	*	760
G. W. Terrell (Sec. 255) 2	*	772
Sheldon & Shaw, Belknap (Sec. 22) 4	50	716
E. C. Stovall et al, Fee 14	150	4272
Swink & Smith, Belknap (Sec. 22) 2-B	170	664
Belknap (Sec. 22) 3-B	150	696
Belknap (Sec. 22) 5-B	150	701
Wooten & Reed, Robinson 1-B	*	703
Josh Swain (Sec. 1466) 1	*	694

CENTRAL EAST TEXAS

BROWN COUNTY—		
Humble O&R Co., E. P. & W. H. Kilgore 4-A	35	1220
COLEMAN COUNTY—		
F. Lane et al, T. B. DeBusk 1	*	1650
J. C. Shaffer et al, J. L. Shields 1	*	2271
EASTLAND COUNTY—		
L. Teatsorth et al, J. W. Carter 1	20	1582
SHACKELFORD COUNTY—		
J. Jarvis et al, W. C. Herrington 1	*	1770
Worth Pet. Co., Clark 2	85	687
Clark 4	20	765

WEST TEXAS

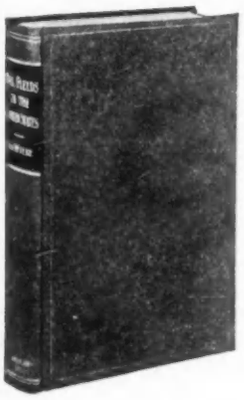
UPTON COUNTY—		
Crosby Oil Prod. & Roy. Co., et al, J. F. Lane 1	240	2334

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
JOINER FIELD—		
Arcadia Refining Co., Green 1	7500	3761
British-American Oil Prod. Co., J. D. Stone (66-ac) 4	8000	3663
Dapoil Oil Co., M. M. Barksdale 1-B	8500	3705
East Texas Ref. Co., D. W. O'Quinn (17-ac) 2	8000	3825
Golding-Murchison Oil Co., A. B. Blackwell (80-ac) 3	7500	3691
Gulf Prod. Co., W. L. Murphy (79.6-ac) 6	9000	3751
S. Stone 2	8400	3648
G. G. Turner (107½-ac) 6	8700	3728
Haynes Drilling Co., E. E. Thrash (19.7-ac) 2	9500	3763
John W. Hooser (Rec.) et al, L. L. Jones (15-ac) 1	9200	3758
Houseman & Walters, Alford 1	10,000	3805
Humble O&R Co., A. D. Blackwell (82-ac) 9	7800	3693
C. A. Brightwell (44.9-ac) 2	6500	3783
Ida Holt (94-ac) 5-A	10,000	3727
W. A. Mullikin (166.4-ac) 5	7800	3729
J. W. Turner (104-ac) 4	5000	3807
J. W. Turner (104-ac) 5	7500	3786
T. M. Woodley 2	9000	3710
T. A. Johnston et al, R. E. L. Silvey (8-ac) 1	8000	3821
Magnolia Pet. Co., J. R. Wright (166-ac) 10	11,000	3657
Mid-Kansas O&G Co., C. L. Graham (134-ac) 1	7000	3645
R. G. Mason (104-ac) 2	10,000	3650
E. E. Moores (182-ac) 3	3500	3645
Owenwood Pool No. 3, C. W. Mullins (30-ac) 3	9000	3749
R-M-V Oil Co., J. A. Birdwell (37-ac) 4	8000	3623
Roussel & Terrell (was McQuigg & Potter), Deason 1	3500	3715
W. H. Rowe et al, A. J. Deason (6-ac) 1	4000	3694
Sinclair O&G Co., Dora Wright 3	9000	3768
Stanolind O&G Co., H. Schuler 1-A	3500	3693
Carl G. Wiley et al, J. Lee (50-ac) 1	7500	3794
KILGORE FIELD—		
J. S. Abercrombie-Harrison Oil Co., Cantrell 7	7000	3684
Atlantic Oil Prod. Co.-Byrd & Frost, Inc., R. Whaley (74-ac) 3	11,000	3642
Tips DeArmand et al, M. E. King 1	7500	3730
Devonian Oil Co.-Gulf Prod. Co., R. A. Motley (147-ac) 6	9000	3710
Dink Oil Co. (was Cal. Movie Stars), Andy Givens 1	8500	3642
East Texas Ref. Co., M. Mayfield (22-ac) 1	200	3730
Golding-Murchison Oil Co., L. P. Griffin (37½-ac) 4	8000	3600
Gulf Prod. Co., H. C. Alexander 3	7000	3561
R. N. Brightwell (50-ac) 5	5500	3641
C. E. Christian 1-B	8400	3634
M. T. Cole (187-ac) 3	7800	3547
Laird 3-A	8000	3594
G. H. Morris 1	8000	3648
J. B. Watson (78-ac) 6	12,000	3585
Humble O&R Co., L. D. Crim 37	6000	3629
S. S. Laird 13-B	3000	3630
J. N. Peterson 14	7800	3607
Henry Sexton (100-ac) 3-A	7000	3766
Invincible Oil Co., M. J. Register 1	8000	3566
W. C. Knox et al (was Thompson et al), Clayton (7.ac) 1	8500	3536
Magnolia Pet. Co., L. A. Griffin (44¼-ac) 4	10,500	3578
A. A. Johnson 1	10,000	3686
Ben Laird (82¼-ac) 4	12,000	3592
Roy R. Martin et al (was Vance-Fagan), C. M. Dickson (1½-ac) 1	9000	3600
A. G. Oliphant et al, Powers 1	6500	3814
Patterson Drlg. Co., M. Brock (9-ac) 1	9000	3649
Prarie O&G Co., W. B. Walker (80-ac) 2	10,000	3684
Shell Pet. Corp., J. S. King (62½-ac) 3	8000	3659
J. H. Spivey (88-ac) 3	10,000	3760
Williams-Bonner 2	9000	3620
Sun Oil Co., C. H. Hilburn-Chas. Lloyd (133.7-ac) 10	7800	3691
The Texas Co., W. Davis (64-ac) 4	10,000	3575
H. T. Elder 5	10,000	3645
LONGVIEW FIELD—		
Adams & Lyles et al, T. Anderson 1	12,000	3508
Amerada Pet. Corp., J. Freeman 1	9500	3700
McPherson 1	5000	3588
Arkansas Fuel Oil Co., C. C. Clemens (31-ac) 2	8000	3632
P. D. Harrison 2-A	7000	3577
W. L. Hestland (32-ac) 2	5000	3633
Arkansas-Yount-Lee Oil Co., F. K. Lathrop (96-ac) 6-A	4500	3582
F. K. Lathrop (96-ac) 7-A	4500	3575
Atlantic Oil Prod. Co., J. J. Fuller 1	8000	3740
J. J. Fuller 2	8400	3696
Atlantic & Sun Oil Co., M. Hays (78½-ac) 2	9000	3523
Badgett & J. W. Falvey, J. W. Falvey (58½-ac) 2	8000	3705
Columbia O&G Co., J. G. McGrede (41-ac) 1	7500	3600
Cranfill-Reynolds Co., J. G. McGrede (16-ac) 2	11,000	3646
G. A. Porter 3	7000	3696
Dillard Oil Co., W. A. Jones (50-ac) 3	10,000	3655
Empire Gas & Fuel Co., Joe Bender (24.3-ac) 2	15,000	3581
L. A. Jeter (121-ac) 1	9000	3565
Lee 1	7000	3570
L. J. Rogers (68-ac) 3	9500	3604
Galvez Oil Corp., M. O. Sheppard 1	15,000	3578
Gulf Prod. Co., F. M. Fonville 1	14,000	3550
A. Neeley (50-ac) 3	10,000	3528
Humble O&R Co., A. Carter (92-ac) 4	9000	3631
G. W. Johnson (100-ac) 1	8500	3712
G. W. Johnson (100-ac) 3	5000	3716
J. T. Miller 1	4500	3761
Eva O'Byrne 1-C	2000	3735
Leonard Pet. Co., H. G. Corbin (20-ac) 2	13,000	3593
Lucey Pet. Co., M. B. Fisher 1	15,000	3552
Magnolia Pet. Co., Clarence Davis (18.6-ac) 3	7600	3571
L. J. Everett (171.1-ac) 7	12,000	3681
W. E. Jones (99.92-ac) 4	9500	3663
Oils, Inc., K. Mosely (7.8-ac) 2	11,000	3470
Roeser-Pendleton, Inc., B. Rodden (32.ac) 3	9500	3582
Shell Pet. Corp., C. C. Landers (107-ac) 4	6500	3675
Stinchcomb 1	8500	3565
D. J. Simpson et al, Jackson 1	7500	3877
Stanolind O&G Co.-Simms Oil Co., F. M. Fonville (100-ac) 2	8000	3568
Sun Oil Co., J. W. Akin (166.2-ac) 4	8500	3578
G. W. Tate (64.8-ac) 4	6000	3536
Superior Oil Co., H. Pritchard (100-ac) 1-A	11,000	3523
Tidal Oil Co., S. L. Dansby (56-ac) 1	8000	3747
W. C. Turnbow et al, J. C. McKinley 1	9500	3644
Vacuum Oil Co., J. H. Beavers 2	11,000	3553
R. B. White (88-ac) 3	15,000	3576
Virginia Oil Co. et al, T. B. Harris 1	9500	3516
Yount-Lee Oil Co., J. Flemister (60-ac) 1	8500	3583
J. Flemister (60-ac) 2	12,500	3628
VAN FIELD—		
Pure Oil Co., Mrs. W. A. York (50-ac) 4	8500	2924
CASS COUNTY—		
Olds & Smith, J. E. Anthony	*	3656
J. F. Morrissey et al, T. J. Wilson 1	*	3680
UPSHUR COUNTY—		
P. H. Wilson et al, J. C. Williford 1	*	3803

SOUTH TEXAS

BEE COUNTY—		
Lefevre & Buchanan's Ray 1	2000	3908
DE WITT COUNTY—		
Gibson & Strum's Clark 1	*	
DUVAL COUNTY—		
Cole Pet. Co.'s Benavides 70	100	1736
Southern Gas Utilities Co.'s Benavides 1-E	¶35	2451
JIM HOGG COUNTY—		
Cole Pet. Co.'s Palacios	*	2430
REFUGIO COUNTY—		
Moody-Seagraves Prod. Co.'s O'Conner 4	65	6381
STARR COUNTY—		
Hook &Weaver's Kelsey 2	25	500
VICTORIA COUNTY—		
United Prod. Co.'s McFadden 5-A	¶60	3761
WEBB COUNTY—		
O. W. Killam's Bruni 21	¶10	2312



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By WALTER A. VER WIEBE

Professor of Geology, University of Wichita

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CALIFORNIA

WEST COYOTE—Standard Oil Co., Murphy-Coyote 108, 18-3-10; Murphy-Coyote 109, 19-3-10; Murphy-Coyote 110, 18-3-10.

FRUITVALE — Seahawk Pet. Co., No. 1, 23-29-27.

KETTLEMAN HILLS — Kettleman North Dome Association, No. 61, 2-22-17.

MESA—Cliff Pet. Corp., No. 28, 28-4-27.

MONTEBELLO—R. W. Wardell and L. J. Menichini, No. 1, 7-2-11.

LOUISIANA

CAMERON PARISH—Calcasieu Oil Co., Sulphur, Watkins 27, 13-12s-10w, 1151 ft n and 1593 ft w of se cor of sec.

KANSAS

GREENWOOD COUNTY—York State Oil Co.'s Rice 2, se sw nw 22-23-11e; Syndicate Oil Co.'s Shook 7, ne c sw 6-24-12e.

McPHERSON COUNTY—Shawver & Shell's Lively 2, sw nw nw 21-19-1w.

OKLAHOMA

CREEK COUNTY—Kirchner et al, Strip 1, se c ne 13-19-1e. Liberty Pipe Co., Land 1, nw c sw, 12-18-11e. F. R. Billingslea, Wayman 3, ne c sw nw 22-15-8e. Shamblin, Smith et al, Cloud 1, se c ne ne se, 31-15-8e.

MUSKOGEE COUNTY—H. L. Jolly, Spaulding 3, se c ne se ne 8-15-18e.

OKMULGEE COUNTY — Tiffany Bros., Somins 2, se c ne sw 25-16-11e. McNutt, Davis et al, Smith 1, se c nw nw 20-13-13e.

OKLAHOMA COUNTY — Anderson, Kerr et al, Black 1, ne c nw nw 10-11-3w. Anderson, Kerr and Continental Oil Co., Metcalf 1, se c ne sw 15-11-3w. Anderson, Kerr and Continental Oil, Sheilds 1, ne se sw 15-11-3w. Skelly Oil, Ledbetter 1, sw c ne nw ne 22-11-3w.

PAWNEE COUNTY—Arkansas Utility Co., Neilson 2, csl ne sw 27-21-8e.

PITTSBURG COUNTY—J. E. Weible, Mattox 2, sw c ne sw 5-18-16e.

STEPHENS COUNTY—H. J. Brown, Hightower 2, sw c se se ne 15-3s-5w.

WAGONER COUNTY — Braman Oil Co., Colbert 1, nw c sw 32-18-17e.

TEXAS

AUSTIN COUNTY — Humble Oil & Ref. Co., Houston, M. Remmert, 1, T. Bell sur, west central part of lease.

BELL COUNTY—W. H. Birdwell, Rockdale, W. Witter, 67, 1, S. Frazier sur, 150 ft from n and e lines.

BEXAR COUNTY—Jno. T. Callahan, San Antonio, J. H. Buck, 161, J. M. McCamley sur, 750 ft from n and 800 ft from e line.

COLEMAN COUNTY—Brown & Ekholm, Colemon, F. Golson, 40, 8, D. J. Holt sur, 150 ft from n and w lines.

DUVAL COUNTY—Thomas & Tarver, Inc., San Antonio, Waelder 1, Sec. 102, 501 ft s of center of n line.

FISHER COUNTY — Texas Co., Wichita Falls, M. T. Gannaway, 320, 1, S 194, B 1, BBB&C sur, 990 ft from w and 330 ft from s li e½.

GREGG COUNTY—Sinclair Oil & Gas Co., Fort Worth, M. Moncrief, 307, 13, Wm. Castleberry sur, 2828 ft from w and 336 ft from s line; 14, 330 ft from s and e lines; 11, 2195 ft from w and 330 ft from s line; A. A. King, A, 290, 9, P. W. Warraner sur, 796 ft from w and 330 ft from s line; A. A. King, B, 190, 1, J. Keiser, sur, 330 ft from s and w lines; A. A. King, A, 290, 12, P. W. Warraner sur, 330 ft from s and e lines; 11, 330 ft from w and 1691 ft from s line; M. T. Cole, 666, 13, S. Brooks sur, 330 ft from n and 2037 ft from e line; 14, 330 ft from n and 3396 ft from e line; 15, 1035 ft from n and 330 ft from w line; 16, 1750 ft from n and 330 ft from w line;17, 1750 ft from n and 1350 ft from w line; A. A. King, B, 111, 3, J. G. Walker sur, 330 ft from s and e lines; S. G. Andrews, 200, 3, J. G. Walker sur, 330 ft from s and w lines; M. Moncrief, 307, 12, W. H. Castleberry sur, 330 ft from s and w lines;

For Tabulation and Comparison See Market Section

A. A. King, A, 290, 10, P. W. Warraner sur, 2110 ft from w and 330 ft from s line; J. W. Akin, 96, 4, W. H. Castleberry sur, 330 ft from s and w lines; 5, 330 ft from s and e lines. Stanolind Oil & Gas Co., Longview, M. B. Harley, C, 41, 2, G. W. Hooper sur, 330 ft from s and w lines; 3, 330 ft from n and w lines; 4, 330 ft from s and e lines; P. McGeorge, 100, 2, P. McAnulty sur, 330 ft from s and e lines; Cox-Hamon, 72, 3, W. H. Castleberry sur, 450 ft from n and 330 ft from w line; N. Radford, 19, 1, J. Blair sur, 462 ft from w and 478 ft from s line; B. Jones, 27, 1, G. W. Hooper sur, 378 ft from e and 330 ft from s line; E. L. Walker, 35, 1, M. Dillard sur, 1140 ft from n and 400 ft from e line. Manson Oil Co., Chicasha, Okla., Webb, 34, 2, Hooper sur, 330 ft from s and e lines (Upshur county); Barrett, 100, 2, Witcher sur, 660 ft e of No. 1; 3, 660 ft e of No. 2. Texas Co., Shreveport, La., E. M. Woods, 90, 4, M. Dillard sur, 575 ft w of No. 1; T. W. Lee, 210, 2, Wm. Tyndale sur, 330 ft from n and w lines; H. T. Elder, 53, 6, M. Scott sur, 331 ft from n and e lines. Arkansas Fuel Oil Co., Shreveport, La., Lathrop, 96, A8, Wm. Robinson sur, 300 ft from w and 303 ft from n line; A9, 466 ft w of No. A4; G. A. Castleberry, 52, 3, D. Sanchez sur, 855 ft n of No. 2; L. E. Orms, 55, 3, W. H. Castleberry sur, 330 ft from n and e lines; C. Clemens, 31, 3, D. Sanchez sur, 330 ft from n and w lines. East Texas Shore Line Prod. Co., Longview, N. Walters, 140, 1, B. W. Witcher sur, 335 ft from s and w lines. J. C. Falvey Longview, B. E. Rodden, 5, 1, Wm. Robinson sur. Imperator Oil Corp., Dallas, W. A. Southworth, 2, 1, A. Park sur, center. Sells Pet., Inc., Tyler, R. Fisher, 63, 1, W. G. Painter sur, 265 ft from n and 268 ft from e line. Sells Pet., Inc., Tyler, W. E. McKinney, 317, Tyler, Wilhite, 1, G. W. Hooper sur, 330 ft from n and 151 ft from e line; 2, se corner. Tidal Oil Co., Fort Worth, J. Bean, 85, 3, J. Lewis sur, 330 ft from s and e lines. Mullendore, Berry & Berry, Longview, G. Anderson, 25, 1, McAnelly-Alexander sur, 330 ft from n and e lines. Yount-Lee Oil Co., Beaumont, Adrian-McCrary, 65, 2, Wm. Castleberry sur, 680 ft from n and 330 ft from w line. Galvez Oil Corp., Tulsa, Okla., M. O. Shepard, 36, 2, G. A. Thomason sur, 660 ft e of No. 1. Heep Oil Corp., Houston, S. B. Hall, 50, 2, D. Dainwood sur, 330 ft from n and e lines. Magnolia Pet. Co., Dallas, J. W. Free, 169, 13, G. W. Hooper sur, 330 ft from n and e lines; T. W. Tuttle, 48, 1, W. H. Castleberry sur, 330 ft from n and w lines; 2, 330 ft from n and e lines; H. Key, 64, Jno. Ruddle sur, 210 ft from n and 150 ft from e line. E. E. Fogleson, Dallas, J. B. Doby, 3, 1, W. H. Castleberry sur, 155 ft from e and 152 ft from s line. Natalie King, Marshall, Gladewater 2, 1, Gladewater Twste., 155 ft from w and 205 ft from S 1, Blk 61. Cox & Hamon, Ardmore, Okla., E. Lacy, 50, 1, J. Ruddle sur, 300 ft from e and 100 ft from s line; 2, 330 ft from s and w lines; L. A. Rodden, 110, 4, L. J. Rigsby sur, 990 ft from n and 330 ft from e line. Champlin & Bass, Inc., Tyler, G. C. Mattox, 23, 1, D. Sanchez sur, 330 ft from w and 410 ft from s line. Jones-O'Brien, Inc., Shreveport, La., J. Lloyd, 25, 1, L. B. Outlaw sur, 330 ft from n and e lines. Humble O&R Co., Houston, A. L. Hughes, 91, 3, G. H. Hampton sur, 157 ft from n and 1092 ft from w line; G. W. Johnson, 100, 4, G. W. Hooper sur, 330 ft from s and e lines; T. M. Armstrong, 79, 3, J. R. Crozby sur, 803 ft from w and 330 ft from s line. California Pet. Corp., Shreveport, La., W. M. Clements, 60, 2, M. Mann sur, 9708 ft from n and 330 ft from e line; C. Jones, 40, 3, G. W. Hooper sur, 330 ft from s and w lines; W. F. Glenn, 28, 2, G. W. Hooper sur, 812 ft from n and 330 ft from e line. Gregg Oil Co., Gladewater, F. B. Campbell, 4, 1, Jno. Ruddle sur, sw corner. Vacuum Oil Co., Houston, R. B. White, 5, D. Moore sur, 300 ft from w and 1299 ft from s line. A. G. Oliphant, Longview, B. B. Peterson, 80, 4, J. S. Caruthers sur, 560 ft n of No. 5; 5, 330 ft from s and e lines. W. O. Ambrose, Longview, D. L. Magrill, 45, 3, D. Sanchez sur, 415 ft from n and 330 ft from w line. G. J. Stumpf, Kilgore, E. Choice, 4, 1, M. Van Winkle sur, 180 ft from n and 255 ft from e line. Jackson, Wise & Snedden, Kilgore, R. Corbin, 40, 2, H. H. Edwards sur, 300 ft from n and w lines. Dimham Oil Corp., Shreveport, La., McGrede, 10, 2, D. Sanchez sur, 150 ft from n and e lines. Superior Oil Co., Dallas, L. C. Ingram, 162, 2, W. E. Pasteur sur, 2042 ft from n and 330 ft from w line; A. Jones, 64, 3, G. W. Hooper sur, 330 ft from s and e lines; 4, 991 ft w of No. 3. F. H. E. Oil Co., Fort Worth, J. Flemister, 37, 3, B 13, G. W. Hooper sur, 150 ft from n and w lines; B. C. Christian, 87, 2, G. W. Hooper sur, 151 ft from s and w lines. Alma Pet. Corp., Oklahoma City, Okla., C. W. Watson, 35, 1, T. Allen sur, 330 ft from s and e lines. Atlantic Oil Prod. Co., Dallas, E. Burnside, 204, 4, F. W. Johnson sur, east central part of lease. Continental Oil Co., Fort Worth, C. C. Crews, 160, 5, L. Ferkins sur, 715 ft s of No. 4; 4, 705 ft s of No. 3. Selby Oil & Gas Co., Tulsa, Okla., L. C. Ingram, 80, 2, W. E. Pasteur sur, 330 ft from e and 1230 ft from s line. Adams & Lyles, Lockhart, T. Anderson, 62, 2, Jno. Ruddle sur, 330 ft from e and 1000 ft from s line. Wrightsman Oil Co., Longview, G. E. Adams, 33, 2, H. Hathaway sur, 330 ft from n and e lines. Houston Oil Co., Houston, W. A. Bouknight, 70, 3, H. H. Edwards sur, 519 ft w of No. 1. E. L. Smith Oil Co., Inc., Mexia, M. J. Register, 29, 1, G. F. Penn sur, 330 ft from n and 450 ft from w line. Sun Oil Co., Dallas, Hilburn 137, 11, W. P. Chisum sur, 996 ft from n and 330 ft from e line; D. G. Sparks, 50, 1, H. H. Kirk sur, 250 ft from n and e lines. Shell Pet. Corp., Dallas, H. Hampton, 169, 2, D. Ferguson sur, 330 ft from w and 754 ft from s line; W. W. Elder, 145, 9, J. S. Caruthers sur, nw corner; J. S. Elder, A, 50, 2, M. Van Winkle sur, 330 ft from n and e lines; W. T. Burnside, 160, 2, F. W. Johnson sur, 1197 ft from n and 330 ft from e line; C. C. Slaton ,100, 2, G. W. Hooper sur, 330 ft from n and 390 ft from e line. H. H. Coffield, Rockdale, White Oak Sch. 2, 1, Wm. Castleberry sur, center. Prairie Oil & Gas Co., Ranger, H. J. Thomas, 1, J. Norris sur, 330 ft from n and 380 ft from e line; J. K. Wadley, 1, W. H. Castleberry sur, 150 ft from e and 200 ft from s line; W. B. Walker, 3, E. H. Grisham sur, 400 ft from n and 300 ft from e line; 4, 1060 ft s of No. 3; A. A. Lockhart, 87, 2, A. Norris sur, 330 ft from n and w lines; I. Isley, No. 5 G. R. Rains sur, 1071 ft n of No. 4; 4, 330 ft from s and e lines. H. S. Moss, Dallas, F. Marshall, 39, 3, M. Van Winkle sur, 300 ft n of No. 1; 2, 300 ft e of No. 1. O. J. Perrin, Dallas, E. E. Anderson, 19, 2, G. W. Hooper sur, 330 ft n of center of s line. Frank Russell, Overton, F. Stone, 50, 1, B. Anderson sur, 160 ft from n and e lines. Amerada Pet. Corp., Fort Worth, A. Tooke, 60, 1, W. G. Painter sur, 330 ft from s and e lines; E. Burnside, 100 1, F. W. Johnson sur, 330 ft from n and 418 ft from e line. Shasta Oil Co., Longview, E. G. Richie, 24, 2B, C. Rhodes sur, 330 ft from n and 403 ft from e line; T. D. Campbell, 11, 1B, D. Ferguson sur, 330 ft from n and e lines; T. D. Campbell, 56, 2, D. Ferguson sur, 330 ft from n and w lines. Grisham-Hunter Corp., Abilene, T. & P. 2, 1, M. Dillard sur, 175 ft from n and 150 ft from w li Blk. 66. Broughton & Wilkinson, Tyler, E. M. Bramlette, 23, 1, D. Sanchez sur, 330 ft from n and w lines. Gulf Prod. Co., Houston, M. O. Shepperd, 335, 4, G. R. Rains, 330 ft from s and w lines; 5, 1072 ft from s and 330 ft from w line.

GRAY COUNTY — Skelly Oil Co., Tulsa, Okla., W. G. Heaston, 80, 2, S 164, B 3, I&GN sur, se corner. Smith & Ash, Wichita, Kans., Morse, B, 80, 3, S 2, B 26, H&GN sur, 330 ft

from s and e lines n½ of ne¼. Joana Oil Corp., Amarillo, G. H. Beavers, 200, 1, S 124, B 2, H&GN sur, 400 ft from e and 600 ft from s li ne¼. Kewanee Oil & Gas Co., Tulsa, Okla., Rest, 240, 4, S 149, B 3, I&GN sur, 1650 ft from n and 330 ft from w line.

GOLIAD COUNTY—Plymouth Oil Co. & Benedum Trees, Texon, C. B. Parks, 402, 1, No. 8 BS&F sur, se corner.

GUADALUPE COUNTY — Humble Oil & Ref. Co., Houston, D. J. Denman, 200, 1, Wm. Arrington sur, 450 ft from n and 1438 ft from w line.

HARDIN COUNTY — Ada Belle Oil Co., Batson, Fee, 3, 148, J. Knight sur, ne corner. Rio Bravo Oil Co., Houston, Fee, 158, C119A J. F. Cotton sur, 160 ft ne of No. 188A; C120A, 180 ft w of No. 116A.

McLENNAN COUNTY — C. E. Groover, Waco, E. M. Wilbanks, 456, 2, S 5, T. Vega, Rge. 2, 2530 ft from s and 150 ft from e line.

MATAGORDA COUNTY—United North & South Dev. Co., San Antonio, L. V. Stoddard, 12, 1, J. R. Meller sur, 150 ft from e and 545 ft from s li Blk. 53.

RUSK COUNTY—Shell Pet. Corp., Dallas, D. Wills, 85, 4, W. P. Chisum sur, 745 ft from n and 270 ft from e line; R. Russell, 126, 8, R. W. Smith sur, 580 ft w of No. 1. Sinclair Oil & Gas Co., Fort Worth, F. B. Wilson, 124, 4, R. McAnulty sur, 330 ft from s and e lines; W. W. Holland, 50, 10, J. Ximinez sur, 150 ft from n and e lines; W. D. Kinney, 68 20, J. B. Cadena sur, 330 ft from n and e lines; F. B. Wilson, 124, 7, McAnulty sur, 2015 ft from n and 479 ft from e line; W. D. Kinney, 132, 15, J. B. Cadena sur, 330 ft from s and e lines; W. D. Kinney, 121, 16, J. B. Cadena sur, 330 ft from s and w lines; 17, 330 ft from s and e lines; Mayfield, B, 149, 6, J. B. Cadena sur, 1307 ft from n and 330 ft from e line; 7, 330 ft from s and w lines; 8, 330 ft from s and e lines; 5, 1110 ft from n and 330 ft from w line; W. D. Kinney, 117, 11, J. B. Cadena sur, 330 ft from n and w lines; 12, 330 ft from n and e lines; W. D. Kinney, 132, 14, J. B. Cadena sur, 330 ft from s and w lines; Mayfield, B, 149, 4, J. B. Cadena sur, 330 ft from n and e lines; W. D. Kinney, 138, 13, J. B. Cadena sur, 330 ft from w and 2 ft from s line; W. D. Kinney, 121, 19, J. B. Cadena sur, 934 ft from n and 330 ft from e line. A. G. Oliphant, Longview, W. O. Alford, 40, 1, Cordova sur, 330 ft from n and e lines. Geo. Guthrie et al, San Antonio, G. H. Morris, 16, 1, W. R. Cook sur, 333 ft from s and e lines. T. H. Martin, Eldorado, Ark., A. P. Finney, 62, 2, I. G. Parker sur, 150 ft from n and 205 ft from w line. Stanolind Oil & Gas Co., Longview, J. R. beall, 80, 4, W. P. Chisum sur, 425 ft from w and 1554 ft from s line; 5, 1554 ft from n and 425 ft from w line; M. B. King, 50, 4, M. McCabe sur, 330 ft from n and e lines. C. M. Johnson, Dallas, H. L. Griffin, 20, 1, J. B. Cadena sur, 503 ft from n and 432 ft from e line. Tulsa Oil Co., Tulsa, Okla., J. E. Wheelis, 40, 1, D. Shaw sur, 330 ft from n and 170 ft from e line. Gulf Prod. Co., Houston, C. E. Christian, C, 277, 9, W. W. Simms sur, 330 ft from n and w lines; 10, 3667 ft from s and 331 ft from w line; 11, 660 ft s of No. 2. Republic Prod. Co., Longview, L. P. Thrash, 40, 2, F. Cordova sur, 602 ft w of No. 1. Texas Co., Shreveport, La., W. T. Chappell, 80, 2, W. A. Elliott sur, 330 ft from s and e lines; First State Bank, 160, 4, J. C. Smith sur, 330 ft from s and w lines. Falcon Co., Fort Worth, T. O. Mason, 148, 6, J. B. Cadena sur, 330 ft from n and 480 ft from w line. Mid-Kansas Oil & Gas Co., Shreveport, La., J. F. Mason, 116, 1, J. B. Cadena sur, 343 ft from n and 476 ft from e line; E. E. Moores, 182, 6, J. B. Cadena sur, 563 ft from w and 330 ft from s line; 4, 170 ft from n and 160 ft from w line; 5, 180 ft w of center of e line; C. L. Graham, 134, 3, J. B. Cadena sur, 345 ft n of No. 1. Roeser & Pendleton, Inc., Fort Worth, R. Pool, 65, 4, F. Cordova sur, 330 ft from w and 171 ft from s line. Mrs. B. F. Teague, Brenham, Fee, 2, 1, W. G. Tutt sur, ne corner of Blk. 124. Strickland Oil Co., Houston, A. D. Blackwell, 7, 1, M. J. Pru sur, center. Sun Oil Co., Dallas, A. A. King, 100, 1, P. W. Holmes sur, 225 ft from s and e lines. Humble Oil & Ref. Co., Houston, W. P. Moore, B, 57, T. J. Martin sur, 780 ft from w and 330 ft from n line; W. A. Mullikin, 241, 7, T. J. Martin sur, 584 ft s of No. 4; 6, ne corner; J. E. Sexton, A, 100, 4, M. McCabe sur, 641 ft from n and 330 ft from e line.

REEVES COUNTY—F. McDorman et al, Pecos, J. J. Shara, 640, 1, S 22, B 59, School sur, 2310 ft from s and e lines of sec.

SHELBY COUNTY—United North & South Dev. Co., San Antonio, W. C. Windham, 171, 1, A. H. English sur, 800 ft from e and 1000 ft from s line.

SHACKELFORD COUNTY—Scott & Walker, Albany, L. C. Huskey, 320, 25, TE&L sur, 1650 ft from n and 1500 ft from w line.

SMITH COUNTY—Sinclair Oil & Gas Co., Fort Worth, Texas, D. Wright, 162, 8, J. Vargas sur, 1665 ft from n and 332 ft from e line; A. S. Jarvis, C, 256, 2, M. S. Coy sur, 330 ft from s and e lines; 3, 330 ft from n and 1625 ft from e line; Mayfield, A, 374, 7, Jas. Jordan sur, 330 ft from n and 2788 ft from e line; 6, 330 ft from n and 1575 ft from e line; W. S. Wright, 10, 1, J. Vargas sur, 332 ft from n and w lines; F. B. Wilson, 124, 5, R. McAnulty sur, 330 ft from s and w lines; 6, 1955 ft from n and 417 ft from w line; Mayfield, A, 374, 10, Jas. Jordan sur, 330 ft from s and w lines; R. G. Wright, 107, 6, J. Vargas sur, 330 ft from s and e lines; A. S. Jarvis, A, 266, 4, J. Vargas sur, 330 ft from n and e lines; 5, 1060 ft from n and 330 ft from e line; 6, 1790 ft from n and 330 ft from e line; 7, 330 ft from n and 1696 ft from e line; 8, 330 ft from n and 2682 ft from e line; A. S. Jarvis, B, 116, 5, J. Vargas sur, 330 ft from n and w lines;6, 330 ft from s and w lines; 7, 1150 ft from n and 330 ft from e line; 8, 1471 ft from s and 330 ft from w line; 9, 535 ft from w and 330 ft from s line; D. Wright, 162, 7, J. Vargas sur, 997 ft from n and 332 ft from e line; 6, 332 ft from n and e lines; 10, 332 ft from n and e lines; 9, 2236 ft from n and 332 ft from e line; R. G. Wright 107, 3, J. Vargas sur, 751 ft from n and 332 ft from w line; 4, 1415 ft from n and 332 ft from w line; 5, 2080 ft from n and 332 ft from w line; E. Wright, 10, 1, J. Vargas sur, 332 ft from n and e lines; J. R. Wright, 10, 1, J. Vargas sur, 332 ft from n and e lines; B. Wright, 10, 1, J. Vargas sur, 332 ft from n and e lines. Texas Co., Shreveport, La., A. S. Jarvis, 161, 3, M. S. Coy sur, 330 ft from s and w lines.

UPSHUR COUNTY — Manson Oil Co., Chickasha, Okla., Webb, 34, 2, Hooper sur, 330 ft from s and e lines. Chatham Oil Co., Tulsa, Okla., H. Fenton, 38, 2, D. Ferguson sur, 330 ft from s and w lines. Humble Oil & Ref. Co., Houston, C. T. Shelton, 59, 1, Wm. King sur, 330 ft from e and 369 ft from s line; I. D. Smith, 50, 4, H. H. Edwards sur, 775 ft from n and 330 ft from e line; J. Phillips, 75, 2, H. H. Edwards sur, 511 ft from e and 316 ft from s line; 1, 330 ft from n and w lines. Magnolia Pet. Co., Dallas, N. W. Blackwell, 90, H. H. Edwards sur, 330 ft from s and w lines; J. A. Johnson, C. T. Shelton, 1, 1, G. W. Hooper sur, 84 ft from n and 127 ft from e line. East Texas Ref. Co., Dallas, B. Doby, 42, 1, M. Mann sur, 330 ft from s and 418 ft from e line. Feazel-Davenport Corp., Tyler, W. M. Phillips, 71, 2, H. H. Edwards sur, 330 ft from n and 500 ft from e line; 3, 330 ft from n and 500 ft from w line. Shell Pet. Corp., Dallas, C. C. Landers, 107, 5, G. W. Hooper sur, 330 ft from s and e lines. Shano Oil Co., Longview, B. Doby, 43, 1, M. Mann sur, 330 ft from s and e lines. Idaho Oil Co., Longview, Baptist Ch., 1, 1, Wm. King sur, 45 ft from n and 241 ft from e line.

UPTON COUNTY—T. P. Coal & Oil Co., Fort Worth, J. H. Shirk, B, 120, 1, S 1, B B3, MK&T sur, 1650 ft from s and 330 ft from e li of sec.

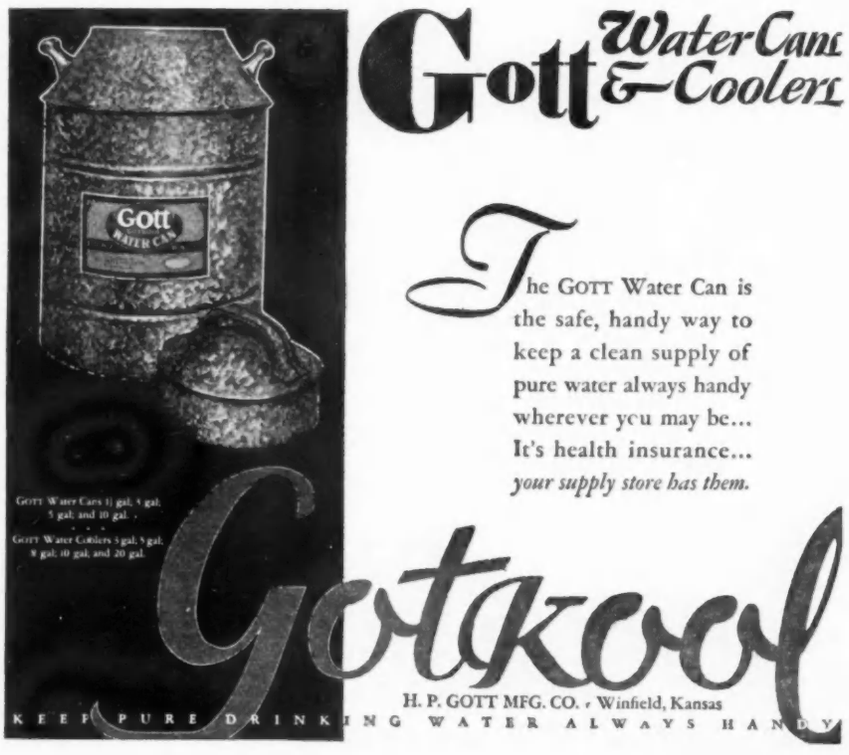
WARD COUNTY—Sudderth & Carey, Pecos, R. G. Blair, 6, 1, S 11, B 5, H&TC sur, 150 ft from s and w lines. Gulf Prod. Co., Fort Worth, G. W. O'Brien, 640, 19, S 6, B F, GM&MBA sur, 998 ft n of No. 10.

WICHITA COUNTY — H. H. Spencer, Burkburnett, J. N. George, 60, 11, J. Wolschmidt sur, 649 ft from n and 150 ft from e line. W. R. Fullerton, Wichita Falls, Foster-Allen, 100, 7, HT&B No. 1 sur, 680 ft from n and 435 ft from w line. Geo. Porter, Wichita Falls, W. B. Honaker, 235, 1, R. Mead sur, 1925 ft from n and 438 ft from w line.

WILBARGER COUNTY—Waggoner Ref. Co., Electra, W. T. Waggoner, E, 120, 14, S 30, B 4, H&TC sur, 417 ft n of No. 3.

YOUNG COUNTY—Belknap Coal Co., Wichita Falls, Fee, 53, 8, 22 TE&L sur, 300 ft e of No. 1. Geo. Mollenkopf et al, Olney, R. Routon, 32, 1, 243 TE&L sur, 762 ft from n and 550 ft from e line; G. W. Terrell, 30, 2, 225 TE&L sur, 150 ft from n and w lines. King Royalty Co., Wichita Falls, J. F. Larimore, 160, 26, 2246 TE&L sur, 1419 ft from n and 1650 ft from e li s½.

ZAPATA COUNTY—Trevino Oil Corp., Laredo, I. G. Trevino, 40, 12, S 412, B 15, 650 ft se of No. 10A. Bob & Richey, Bruni, J. M. G. Martinez, 160, 27, B 24, C. Redondo sur, 150 ft from e and 870 ft from s line. Newton Drilling Co. & Owen, Laredo, R. Garza, 80, 1, No. 161, Share No. 1, 200 ft from n and w lines. Grayburg Oil Co., San Antonio, F. G. Martinez, 240, 1, Sec. 4, 150 ft from s and w lines.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Wildcat Reports from All Sections

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SOUTHERN CALIFORNIA

ALHAMBRA—Yellowstone Oil Co., Huntington 1, 24-1-13, sd 3919 ft, redrilled to 2905 ft, may deepen.

CALABASAS—L. W. Rucker's No. 1, 26-1-17, co 580 ft. Simi Oil Co.'s No. 1, 16-1-17, dr hard sand 2560 ft.

FULLERTON — Standard's Bastanchury 1, cutting 9-inch cas at 3675 ft, td 8145 ft, making test of upper showings.

HERMOSA BEACH — Corniel Oil Corp.'s No. 1, 31-3-14, sd 3100 ft.

LOMITA—Higgins Brothers' Hamlin 1, 6⅝-inch cas cmt 4600 ft, td 4780 ft.

LYNWOOD—William L. Jones' Graham 1, 31-2-12, rigging up.

MONTEREY PARK—Celito Oil Co.'s Jepson 1, plugging bottom, td 5217 ft.

NEWHALL—O. C. O. Oil Co.'s Wilmon 1, dr hard sand 995 ft.

NEWPORT—Ajax Pet. Co.'s B. G. 1, 16-6-10, dr shale 5578 ft. Nuoil Co.'s Gessell 1, 29-6-10, sd 1370 ft. Superior's Irvine 1, 27-6-10, dr hard sand 2615 ft.

OCEAN PARK—Hines Pet. Corp.'s Happy Days 1, 8-2-15, drill pipe lost in hole near top, surface cas collapsed, td 7330 ft.

PLAYA DEL REY—Cooperative Pet. Dev. Co.'s No. 1, 26-2-15, rigging rotary.

ROSEMEAD—Rancho Oil Corp.'s Harmon 1, 30-1-11, 6⅝-inch cas cmt 5830 ft, td 5947 ft.

SAN FERNANDO—El Caballero Estates' No. 1, 23-1-16, dr shale 1330 ft. Mack Oil Co.'s No. 1, 6-2-16, dr shale 440 ft.

WILMINGTON—Ranger Pet. Corp.'s Watson 2, 21-4-13, rigging rotary.

NORTHERN CALIFORNIA

KERN COUNTY

ANTELOPE PLAINS—Meridian Oil Co.'s No. 1, 11-9-15, dr hard sand 3880 ft.

BLACKWELL'S CORNER—Signal Oil and Gas Co.'s No. 1, 15-26-19, will deepen from 100 ft, repairing rig.

BUTTONWILLOW — Graham-Loftus Oil Co.'s Carmel 1, 20-27-22, dr shale 3435 ft. Milham Exploration Co.'s Crites 1, 8-28-23, redrilled to 3086 ft, will run string of cas to 3200 ft.

DEVIL'S DEN — Cumberland Oil Co.'s Cumberland 2, 17-26-18, dr shale 2750 ft.

LOST HILLS—General Pet.'s No. 1301, 13-26-20, fsh for drill pipe 4399 ft. Lincoln Pet. Co.'s Theta 1A, 12-26-30, swabbed on test, made some oil and water, hole bridged at 5240 ft, td 5328 ft.

McKITTRICK — California Oil Producers' No. 2, 30-30-22, dr shale 6666 ft, may not drill deeper.

WEED PATCH—Osborn & Colter's Colter 2, 15-30-29, swabbed mud and trace of oil, td 1952 ft, will make pump test.

SANTA BARBARA COUNTY

COAL OIL POINT—Bolsa Chica Oil Corp.'s No. 191-1, sd 5510 ft, may test upper showings again.

GOLETA—General Pet.'s More 3, 22-4-28, co to 6800 ft, swabbed water and small amount of oil, td 6912 ft. Ohio's Oakley 1, 16-4-28, dr shale 4800 ft.

SANTA MARIA—Western Gulf's Bradley 1, 5-9-33, dr shale 7700 ft.

VENTURA COUNTY

CONEJO—Triunfo Oil Co.'s No. 1, 24-1-19, sd 2487 ft.

HOPPER CANYON — Bardeen Pet. Co.'s Lankershim 1B, 13-4-19, pumping 100 bbls. 29.4 gravity oil, td 1800 ft.

OJAI—Rancho Reva Oil Co.'s No. 8, 28-4-23, dr shale 1550 ft.

OXNARD—Magu Synd.'s Utt 1, 17-1-21, dr shell 5100 ft.

RINCON — Chanslor-Canfield Midway Oil Co.'s Hobson A2, 23-3-24, producing 150 bbls on compressor above plug at 7825 ft, td 10,030 ft. Continental's Grubb 1, 23-3-24, swabbed on test but did not flow, td 6644 ft.

SANTA PAULA — San Pedro-Pt. Fermin Synd.'s Kellerman 1, 13-4-21, dr shale and hard sand 3550 ft.

SOUTH MOUNTAIN—H. H. Bell's Lemon 1, 22-3-21, dr shale 865 ft.

MISCELLANEOUS

FRESNO COUNTY — Associated's Mitchell 1, 22-21-15, sd 6198 ft.

KINGS COUNTY—Knudsen and Schmidt's Avenal 1, 36-23-17, 6⅝-in cas re-cmt 4212 ft, td 4304 ft. Eagle Oil & Gas Co.'s No. 1, 15-23-20, rigging rotary. Kettleman-Lakeview Oil & Gas Co.'s No. 1A, 20-23-20, gas blew in at 1100 ft, killed flow to complete. Valley Exploration Co.'s No. 1, 12-23-19, will deepen from 1287 ft; Vacco 7-12, dr 350 ft.

MENDOCINO COUNTY—Twin State Oil Co.'s Soldani 1, 14-12-17, dr gray sand 7640 ft.

MONTEREY COUNTY—Pacific Inland Oil Co.'s No. 1A, 19-23-15, sdtr iron 1350 ft.

SAN LUIS OBISPO COUNTY — Central Coast Investment Co.'s No. 1, 1-28-12, dr shale 322 ft. Kent & McDonald's No. 1, 3-32-22, dr shale 2165 ft. Trav-El Oil Co.'s No. 1, 7-32-22, co 2395 ft.

TULARE COUNTY—Tulaco Oil Co.'s No. 1, 17-22-22, lcn. W. A. Campbell's No. 1, 22-22-27, lcn. C. E. Pettingill's Dunigan 1, lcn.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn — abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd — shut down; sdtr — sidetracking; sp — spudding; sr — straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

OKLAHOMA

ALFALFA COUNTY—T 27n, R 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY—T 27n, R 2e, Sec. 9, Mummer et al, Sornick 1, nw c se, HFW 2070-2170 ft, sd 3693 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Collmer 2, ne c se ne sw, sd 5640 ft, tools in hole.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, sd 5502 ft.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer, White 1, se c nw, sd 5850 ft, fsg job.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, td 5120 ft, to abandon.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al, Quier 1, se c sw, sd 3970 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig. T 22n, R 5e, Sec. 2, Sherry et al, Milsap 1, se c sw, hfw 3505-50 ft, td 3552 ft, D&A. T 20n, R 5e, Sec. 6, W. A. Rookstool, Berry 1, sw c ne sw, show gas 1942-1951 ft, sd.

LINCOLN COUNTY—T 17n, R 5e, Sec. 36, W. M. Mote et al, School Land 1, nw c, dr 260 ft. T 14n, R 3e, Sec. 2, Hilton Phillips 1, sw c nw, dr 585 ft.

CREEK COUNTY—T 14n, R 7e, Sec. 18, Cal Cal Oil Co., Holleyman 1, se c ne se, spudding.

OKFUSKEE COUNTY—T 12n, R 10e, Sec. 3, Shepperd et al, Shepperd 1, se nw sw, sd 3690 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw nw se, dr 5782 ft. T 7n, R 14e, Sec. 34, Tape Oil Co., Fulton 1, se c, sd 1200 ft.

LATIMER COUNTY—T 6n, R 19e, Sec. 16, P. English et al, Weaver 1, c nw se, sd 1542 ft.

ATOKA COUNTY—T 1n, R 13e, Sec. 31, T. J. Campbell et al, Baird 1, nw ne sw, machine. T 1n, R 15e, Sec. 6, Edgerton et al, Rolland 2, sw ne sw, machine.

OKLAHOMA COUNTY—T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph 1, sw c ne sw se, sd 6700 ft.

SEMINOLE COUNTY—T 10n, R 6e, Sec. 19, Bunte et al, Bruner 1, se c nw, rig.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Ute Oil Co. et al, Williams 1, c sw, sd 5150 ft. T 11n, R 26w, Sec. 4, J. J. Rook and Palmer, Davis 1, c nw ne (owd), sd 3240 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey et al, Robinson 1, c ne nw, sd 150 ft.

WASHITA COUNTY—T 8n, R 19w, Sec. 29, Snodgrass et al, Blocker 1, nw c, sd 2440 ft. T 8n, R 18w, Sec. 21, Burns & Prince, Dock 1, sw c, sd 1106 ft.

GREER COUNTY—T 7n, R 22w, Sec. 1, Good & Dowell, Cliffel 1, nw c, sd 1745 ft.

GREER COUNTY—T 7n, R 21w, Sec. 23, H. A. French et al, Murphy 1, sw nw se, sd 1654 ft.

COMANCHE COUNTY—T 4n, R 12w, Sec. 33, Snodgrass et al, Willetts 1, ne c nw, sd 65 ft.

GARVIN COUNTY—T 2n, R 2w, Sec. 24, Malernee, Phillips 1, ne c sw, sd 4800 ft.

MURRAY COUNTY—T 1n, A 2e, Sec. 6, Capital P&R, Cutchall 1, se c ne, sd 2432 ft.

COAL COUNTY—T 1n, R 8e, Sec. 35, W. E. McCraw, Stiring 1, ne c se, sd 1846 ft. T 1s, R 8e, Sec. 2, Rabiel Oil Co., Richardson 1, ne c nw, fsg 785 ft, dr 830 ft.

ATOKA COUNTY—T 3w, R 10e, Sec. 18, Brookshire et al, Quinn 1, nw c, sd 1540 ft.

LOVE COUNTY—T 6s, R 2e, Sec. 27, Batson et al, Cross 1, ne c nw ne, sd 1632 ft.

BRYAN COUNTY—T 7s, R 10e, Sec. 8, Bryan Oil Co., Childs 1, ne se sw, sd 660 ft.

KANSAS

SUMNER COUNTY—Trees Oil Co., Springate 1, ne se sw, 6-34-2e, td 2300 ft, csg trbl. Spencer et al, Porter 1, ne sw, 12-23-4w, 6-inch 3718 ft, sd 3775 ft.

FORD COUNTY—Carter et al, Community-Everett 18, c ne 22-20-21w, td 6088 ft, pipe stuck, fsh.

KINGMAN COUNTY — Panhandle Drlg. Co., Wetherall 1, c se nw sw, 20-28s-10w, rig.

STAFFORD COUNTY—Rosenthal, Stanelind-Amerada, Gray 1, c ne, 11-34-13w, td 3495 ft, ur 8-inch.

FINNEY COUNTY — National Ref. Co., Wells 1, sw c 13-23-30w, dr 1470 ft.

HARVEY COUNTY—J. P. Flannigan, Sheridan 1, c sw, 32-22-1e, Sil. 1. 3606 ft, td 3610 ft, to run 5-inch.

BARTON COUNTY—McCool et al, Isern 1, c sw se ne, 12-20-11w, 6-inch 3282 ft, sd Skelton Oil, Ott 1, c se se, 16-19-14w, dr 2975 ft.

MORRIS COUNTY—Urschel et al, Bersuch 1, c nw se nw, 10-17-7e, td 915 ft, fsh bit.

ELLSWORTH COUNTY — Keys et al, Gregory 1, sw c 23-17-9w, dr 3200 ft.

SALINE COUNTY — Twin Mounds Oil, Weis 1, c w½ ne nw, 30-13-4w (owd), td 2710 ft, dr by 8-inch.

SHERIDAN COUNTY — Flo et al, Shoemaker 1, se sw sw, 27-27-26w, sd 3495 ft.

NEW MEXICO

BERNALILLO—Norrins Realty, Pajarito Grant, 22-9n-2e, dr 725 ft.

DE BACA—Saldo Dome Oil Corp., sw 6-4n-20e, sd, cemt 3181-89 ft. Landowners Oil Co.'s State 1, ne 16-1s-27e, dr at 4591 ft.

EDDY—Western Drlg. Co., nw 29-17-29, moving in.

DONA ANA—Viking O. & Dev. Co.'s 1, nw 26-23-5e, fsh pipe, td 3065 ft.

GUADALUPE—N. M. Prod. & Ref. Co.'s McMillan 1, 24-5n-16e, dr 2500 ft.

LEA—Pacific Coast Oil Co.'s Blakey 1, nw 28-19-38, moving in.

OTERO—Ernest et al's se 20-26s-7e, sd 1157 ft. Pasotero Oil Corp.'s Evans 1, sw 22-24s-12e, sd 1375 ft.

RIO ARRIBA—Berrenger et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pet. Co.'s Gov't 1, se 14-30n-7w, sd 380 ft. Governador Oil Co.'s 1, 12-29n-7w, dr 1750 ft.

ROOSEVELT—Peterson et al's Good 1, ne 32-5s-30e, ready to sp.

SAN JUAN—Kutz Canon O. & G. Co.'s Day 1, se 20-28n-10w, sd 3635 ft. Rio Grande Dev. Co.'s 2, 9-29-11, ur 6⅝-in cas, td 1770 ft. Continental Oil Co.'s Rattlesnake 24, 1-29n-19w, dr 5912 ft. San Juan Leaseholds' Bowman 3, ne 30-30-15, sd 2685 ft. R. C. Oswell et al, nw 34-30n-11w, cemt 8¼-in cas at 962 ft, td 990 ft. Williams et al's Stallings 1, sw 17-25n-15w, sd 150 ft. Ortega et al's Westwater 2, ne 24-31n-18w, co 2190 ft, td 2460 ft. Dorothy Oil Co.'s Terwilliger 2, se 29-30-9, sd 1750 ft.

SANTA FE—Jones, Owsley et al, 5-10n-9e, lcn.

TORRANCE—Estancia Valley Carbon Dioxide Dev. Co.'s DeHart 2, se se 12-7n-7e, dr 500 ft. Fisher et al, 6-10n-7e, sp.

COLORADO

ADAMS—Hills Dome Lease Dev. Co., se 27-38-64w, resum at 3720 ft.

ARAPAHOE—McDeb Drlg. Co.'s Fitzsimmons 1, ne 7-4n-68w, dr 5785 ft.

BOULDER—C. T. Ahlstrand's Woodley 1, ne 8-3n-70, sd 215 ft. Julius Williams, 6-1n-71w, dr 150 ft.

EL PASO—Utemoor Synd.'s Cannon 1, ne 10-16s-66w, to res 1126 ft.

GRAND—Oil Mineral Lands, Inc.'s McElroy 1, sw 14-2n-81w, sd 545 ft.

JEFFERSON—Ruby Hill O. & G. Co.'s Braden 1, se 24-4s-59w, dr 3965 ft.

LA PLATA—McGarr Pet. Co.'s Pinon Mesa 1, ne 34-33n-12, rig up. Klem Pet. Corp.'s Olbert 1, se 9-26n-12w, sd 3125 ft. J. W. Irwin & Co.'s Doescher 1, nw 29-33n-12, dr 3100 ft.

LINCOLN—Eastern Colo. Oil Corp.'s State 1, 36-14n-57w, fsh 3425 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-57w, sd 5805 ft. Independent O. & R. Co.'s Schmidt 1, nw 19-6n-60w, rig. Badger Creek O. & G. Co., sw 2-2n-57w, wait cas 1200 ft. Colo. Ass. Oil Co.'s Pumphrey 1, se 14-4n-58w, wait cas at 5700 ft. Tulsa-Fort Morgan Oil Co.'s Smith 1, sw 18-6n-60w, cellar. Prairie O. & G. Co.'s Mortier 1, nw 2-5n-60w, rigged and ready to sp. Juhan et al's Kent 1, sw 2-2n-57w, wait cas 1214 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-8s-76w, dr 2480 ft. So. Park O. & G. Co.'s Easche 1, ne 9-5s-76w, sd 2465 ft for cas.

RIO BLANCO—California Co.'s Raven 1, se 20-2n-102, dr 2761 ft. Magnolia Pet. Co.'s Maddock 1, se 9-2s-96w, ur 13⅜-in cas to s.o.w., td 1532 ft.

ROUTT—Mid-Colo. Pet. Corp.'s Omholt 1, ne 29-4n-87w, dr 680 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4-56w, sd 1510 ft.

WELD—Reiter-Foster's Johnson-Juhl 1, 14-6n-61w, coring 6250 ft. Reiter-Foster's Wilson 1, se 24-6n-61w, sp. Aztec Corp.'s State 1, se 1o-6n-61w, 15½-in cas cemt 115 ft. Retter Oil Co.'s Smith 1, 14-1n-68w, dr 1377 ft. Conoco, Gadbois 1, sw 24-6n-61w, bail water before dr in, td 6585 ft. Greeley Oil Co.'s Gadbois 1-B, nw 25-6n-61w, sd 5500 ft for casing. Gulf States Oil Corp.'s Bengston 1, nw 6-4n-63, rigging up cable tools.

WYOMING

CARBON—Midwest Refining Co.'s U. P. 27, 27-11-81, dr 4000 ft. Prairie O. & G. Co.'s Bunker Hill 1, 29-27-87, dr 5552 ft.

CONVERSE—John Ackard, se 24-33-72, dr 1685 ft.

CROOK—Northwest Gas & Oil Co., 6-54-60, sp.

FREMONT—Wiebolt et al, 35-33-99, dd from 1850 ft. Ward O. & G. Co., 28-34-90, fight cave, td 2500 ft. Yellowstone Oil Co., 14-38n-94w, dr below 617 ft.

LINCOLN—Wyo. Prod. Co., 14-24-113, bottomed at 1700 ft.

NATRONA—Midwest's 11, nw 32-34n-77, sd 5340 ft. Midwest's Midway 1, ne 23-35n-79w, recemt to test Muddy, td 5980 ft. Summit Oil Co., 21-33-80, ur, td 1400 ft. Wyo. Imperial Oil Co., se 13-33-79, rig up.

NIOBRARA—Globe Pet. Corp., 2-39-61, dr 248 ft, according to last report.

SHERIDAN—R. & D. Oil Co., se 21-57-87, sd 950 ft.

SWEETWATER—Vermillion O. & G. Co., sw sw 16-12n-99w, ur 8¼-in cas at 4685 ft.

UINTA—Transwestern Petroleums, Ltd., 6-14-118, fsh tools 3100 ft. Clawson et al, 29-14n-118w, lcn. Park City O. & G. Co., 16-15n-113w, dr 2800 ft, according to last report.

WASHAKIE—Ohio Oil Co., lot 14, 19-45-92, dr 7875 ft.

WESTON—LeFaivre Oil Synd., se 29-45n-68w, dr 1400 ft. Julius Peters et al's Witzell 1, se nw 30-46-64, dr 2275 ft. Stockade Anticline Synd., 32-45-60, dr 800 ft. Gose Oil Synd.'s Gose 1, 28-47-65, dr 495 ft.

MONTANA

CASCADE—Buscher & Cassady's Johnson 1, se 19-22-3e, fsh tools 1010 ft. Chas. Merz et al's Sheffelt 1, sw 4-21-4e, rigging up.

CHOTEAU — Williston-Shelby O. & G. Co.'s Flack 1, se 12-28-11e, sd 2867 ft, title difficulties.

GLACIER—Fulton Pet. Corp.'s Blackfeet 1, ne 28-38-12w, dr 2700 ft. Browning Dev. Co.'s Reickhoff 1, ne 3-34-6w, rigged. R. C. Tarrant et al's Haglund 1, sw 13-34-6w, cemt 10-in cas at 616 ft.

GOLDEN VALLEY—Golden Valley Oil Co., 28-6n-22, td 2050 ft.

LIBERTY—Peoples O. & Co.'s First Nat'l Bank 1, ne 17-36-6e, dr 1450 ft. California Co., for Utopia Oil Co., se 11-33-6e, swabbing water 3244 ft. Northland O. & G. Corp.'s Yurman 1, sw 32-33-5e, sd 3705 ft.

ROSEBUD—Prairie O. & G. Co., 1-XX, 26-10-39e, dr 3680 ft.

SWEETGRASS—Shoshone Cons., nw 23-2n-15e, run 6-in cas, td 5792 ft.

TETON—Andever Oil Co.'s Carlson 1, 5-24-4w, sd 150 ft. California Co.'s Sullivan 1, nw 34-27-7w, pull 10-in cas to re-run, td 2137 ft. Earl Oil Corp.'s Gad 1, se 22-22-8w, td 3780 ft.

TOOLE—Liquid Gold Oil Co.'s Elbert 1, ne 25-36-12, to run 5-in cas to s.o.w. 2480 ft. Oregon Oil Synd., se 20-36-2e, 7½m gas at 1295 ft, dr 1450 ft.

YELLOWSTONE—Pan American Oil Synd., 23-2s-24e, cemt 8¼-in cas, td 2095 ft.

ARKANSAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
UNION COUNTY—		
Wilson & Chapman, Henry Norman 1, 3-18-13	940	3583
Handley 1, 3-18-13	47	3570

CHICOT COUNTY—W. R. Smith's Lytle 1, 31-18-3, ta 2925 ft.

CLAY COUNTY—S. C. Jeffus, Tr.'s, Underwood 1, 4-20-8e, dr 1260 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9, sd after testing sw 3515 ft.

CLEVELAND COUNTY—Crum & Stilwell's Bell 1, 10-10s-12w, rigged up and sd.

COLUMBIA COUNTY—Kendall Oil Co.'s Fullenwider & Kitchen 1, ne ne 13-17-22, 8¼-in cas 800 ft, td 804 ft.

CRAWFORD COUNTY—Ozark Nat. Gas Co.'s Hammonds 1, se se 29-10-29, dr 1550 ft shale.

DALLAS COUNTY—Zepp O&G Co.'s W. E. Hillman 2, se ne 20-10-13, 10-in cas 135 ft, cemtd 6-in cas on bottom 2620 ft, chalk rock. Jno. James, Tr.'s, Fordyce Lbr. Co. 1, 11-9s-15w, sd 2520 ft. E. C. Brewer, Tr.'s, Hillman 1, 20-10-13, sd 2869 ft, white sand.

HOT SPRINGS COUNTY—Starr Oil Co.'s Cunningham 1, 11-5-16, 12½-in cas 62 ft, sd 1262 ft shale and bldrs.

JOHNSON COUNTY—Blackwell O&G Co.'s Wyver 1, 21-8-23, ta 5600 ft.

LINCOLN COUNTY—L. B. Cook, Tr.'s, McGehee Pltg. Co. 1, 5-8s-7w, sd 2800 ft.

LITTLE RIVER COUNTY—Fay Roberts Oil Co.'s Russell 1, 25-12-29, lcn.

LOGAN COUNTY—M. W. Greesom's Parks 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-5-26, sd 3610 ft.

MILLER COUNTY—W. E. Noel et al's Dickson 1, 11-20-27, sd 1955 ft, shale and gumbo. Fitzwater et al's E. L. Beck 1, sw se 33-15-26, 10-in cas 85 ft, dr 1600 ft limey shale.

OUACHITA COUNTY—W. H. Copenhaver et al's Berg 1, se se 13-15-17, 10-in cas 42 ft, sd 532 ft gumbo.

PIKE COUNTY—Henderson et al's Tilyou 1, 26-8-24, ta 2920 ft. Kentucky-Ark. O&G Co., Inc.'s East 1, 13-9-23, 10-in cas 288 ft, hole full fresh water, td 709 ft.

PRAIRIE COUNTY—Powell Creek O&G Co.'s Kloss 1, ne sw 3-4n-6w, rig.

SCOTT COUNTY—Heavener O&G Co.'s Reser 1, 36-4-26, sd 1536 ft. Waldron O&G Co.'s J. G. White 1, 17-3n-29w, sd 1860 ft (sec. hole.)

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, sd 1536 ft.

SEVIER COUNTY—Tri-State O&G Co.'s Bank of DeQueen 1, 34-8s-32w, rig.

UNION COUNTY—Southern Prod. Co.'s Wingfield 1, 16-19-15, sd 2608 ft. Lion O. R. Co. et al's Guy P. Hayes A-9, ne ne 4-16-15, elev 96 ft, dr 5929 ft, hd lime with sticky streaks (6000 ft test). Wilson & Chapman's Handley 1, 3-18-13, pumping 47 bbls oil and 8 bbls sw daily, td 3570 ft. Doty Norman A-1, 3-18-13, lcn. Doty Norman B-1, 3-18-13, lcn. Henry Norman 1, 3-18-13, flowing 940 bbls oil day by heads, 23 ft sand, 6⅝-in cas set at top sand 3650 ft, td 3583 ft. A. H. Handley B-1, se nw 3-18-13, dk. Marine Oil Co.'s W. B. Thompson D-1, 3-18-13, rig up and sd. Winn Est. A-2, 11-18-13, ta 3586 ft. Drillers Oil & Dev. Co.'s Pickering 1, 1-17-16, 10-in 42 ft dr 1740 ft gummy lime. Joe Modisette et al's Webb 1, nw se 6-18-13, lcn.

WASHINGTON COUNTY — Lincoln Lease Holding Synd.'s Townsite 1, 3-15-32, ta 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shettarley's Boyd 1, 2-16-32, ta 650 ft. Delbert Graves' Cunningham 1, 14-15-32, sd 602 ft gray sand.

YELL COUNTY — T. Luckett's Balcon 1, 36-7-12, sd 5710 ft.

MISSISSIPPI

Completions

Company, Well and Location	Initial Production Bbls.	Depth
ADAMS COUNTY—		
Ark. La. P. L. Co., Brandon Halls Farms Inc. 1, 32-8n-1w	*	4510

ADAMS COUNTY—Ark. La. P. L. Co.'s Brandon Halls Farms Inc. 1, 32-8n-1w, elev 282 ft, top Vicksburg 1550 ft, top Sparta 2920 ft, dry abn, td 4510 ft.

CLARKE COUNTY (Quitman Dist.)—Gulf Ref. Co.'s Long Bell Lbr. Co. A-1, sw sw 10-2n-16e, elev. 380.3 ft, 15½ cas 105 ft, 10-in 956 ft, top black shale 2290 ft, top chalk 2633 ft, sr to set 6⅝ cas at 3675 ft, td 3700 ft in brown and green sand showing saturation heavy oil.

CHICKASAW COUNTY — Hightower & Gholson's Fleming 1, 20-13s-3e, sd 1640 ft.

HUMPHREYS COUNTY — Danciger O&R Co.'s Bellgrade Lbr. Co. 1, nw nw 29-14-4w, 10-in 659 ft, fsh 2 joints drill stem, bit and collar, td 2080 ft.

JASPER COUNTY (Bay Springs Dist.)—Bay Springs Pet. Inc.'s J. H. Keyes 1, nw ne 21-2n-10e, sd 2360 ft, Wilcox.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-15-19, ta brown sand 3007 ft. P. J. McAlpine's Cowart 1, 2-12s-19w, 5 3/16 cas 3420 ft, dr 3498 ft, lime. Associated Royalties' School Board 1, sw se 16-15-17, ta 60 ft.

NEWTON COUNTY (Newton Dist.)—Dalton Dev. Co.'s Majure 1, se se 25-6n-11e, 10-in 295 ft.

NOXUBEE COUNTY (Macon Dist.) — Thompson O&G Synd.'s Donahue 1, se ne 25-16n-17e, elev. 280 ft, 12½ cas 20 ft, 8¼ cas 1605 ft, td 1715 ft, sandstone; Ames 1, nw nw 24-16-18e, dk. pat.

RANKIN COUNTY (Jackson Dist.) — Gulf Ref. Co.'s Hanna A-1, nw se 23-5n-1e, dr 1390 ft, sandy shale (sec. hole). Atkisson & Dyer's Valentour 1, 18-5-2e, 12½ cas 60 ft, sd 1198 ft. United Pub. Serv. Co.'s McLaurin A-1, ne sw 8-5-2e, elev. 284 ft, 12½ cas 105 ft, 9-in 854 ft, top Wilcox 1219 ft, top chalk 2513 ft, 6⅝ cas stuck at 2493 ft, did not cement, drilled back to bottom at 2523 ft. tested with gas pressure

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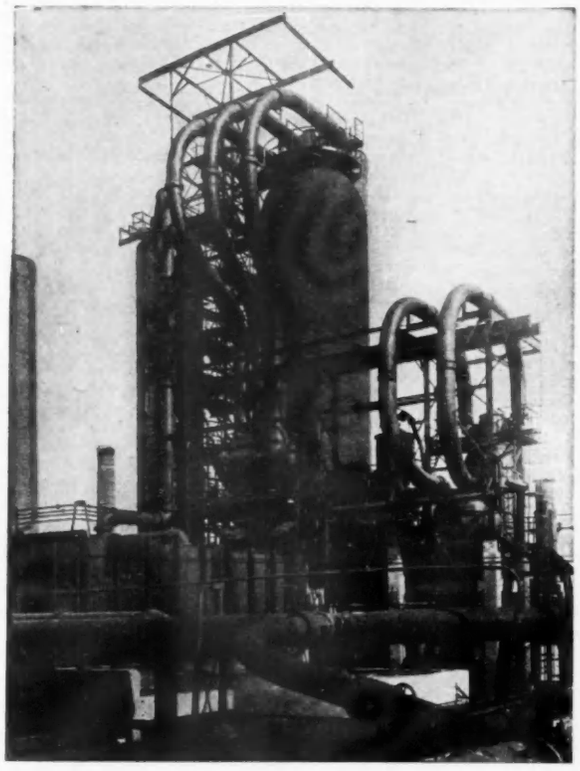

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and well showed sw, dr to 2528 ft in chalk, will test through ds with pckr, td 2528 ft.

SCOTT COUNTY—Culley et al's Owen 1, 2-8n-9e, dk.

WARREN COUNTY (Vicksburg Dist.)—Eagle Lake O&G Co.'s Kiger 1, sw ne 9-18-2e, sd 2607 ft. United Gas Pub. Serv. Co.'s Tchula Store 1, sw se 33-15n-3e, elev. 83.8 ft, 15½ cas 184 ft, 10-in 855 ft, top Claiborne 725 ft, coring 2274 ft.

WEBSTER COUNTY — P. J. McAlpine's Henley 1, se nw 15-21-11e, cored gravel sd 1800 ft.

WINSTON COUNTY (Louisville Dist.)—Miss. Drilling Co.'s Scarbrough 1, nw nw 15-13-14e, trying to get back to bottom, td 4007 ft.

ALABAMA

MADISON COUNTY — Tennessee Valley O&G Co.'s Fee 4, 1-4s-2e, no report.

SUMTER COUNTY (Livingston Dist.)—Forked Lightning O&G Co.'s Nixon 1, 30-20-2w, dk.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, arr change to rotary, td 925 ft, Wilcox; Hobson 1, 9-8-2w, ta 1450 ft. Oscar Brown's U. S. Land & Cotton 2, 25-3-2w, ta 700 ft.

TENNESSEE

DECATUR COUNTY—Chester County O&G Co.'s Montgomery 1, sd 2511 ft (2500 ft contract depth).

NORTH LOUISIANA

Completions

Company, Well and Location	Initial Production Bbls.	Depth
DeSOTO PARISH—		
S. S. Meek, Tr., Wagner 1, 5-12-14.	*	3104
CLAIBORNE PARISH—		
United Gas Pub. Serv. Co., Treadwell & Hawks 1, 6-19-5w	¶29	4380
SABINE PARISH—		
Hawkins et al, Moran 1, 1-7-11.....	25	2620
Loring Oil Co., Bowman-Hicks 19, 16-7-12	*	2975
VERNON PARISH—		
Exchange Pet. Co., White Grandin 1, 29-3n-7w	*	2722

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, 4½ cas 2882 ft, flows small heads oil intermittently, wo, td 2890 ft. Dr. Hankins et al's Newell 1, 12-19-11, sd 1100 ft. D. L. Perkins et al's Ardis 1, 13-15-11, top Nacatosh 944 ft, sd 1004 ft.

CADDO PARISH—United Gas Pub. Serv. Co.'s H. J. Bussa 1, 33-23-16, 12½ cas 375 ft, cemtd 9⅝ cas 3625 ft (5500 ft test). Pelican Nat. Gas Co.'s Cooper 1, 29-18-14, ta 3648 ft, red shale and lime.

CALDWELL PARISH—Monroe Pet. Corp.'s Burton 1, 35-12-2e, sd acct titles, td 2986 ft. Carter Bell et al's Taylor 1, 17-14-4e, 12½ cas 110 ft, sd.

CLAIBORNE PARISH—United Gas Pub. Serv. Co.'s Treadwell & Hawks 1, se nw 6-19-5w, 12½ cas 1517 ft, 9-in cas 4225 ft, top sand 4355 ft, gauged 29 mil ft gas, 1615 lbs rock pressure, td 4380 ft, porous sandy lime (upper Trinity test).

DESOTO PARISH—Rellit O&G Co.'s Cannon Hrs. 1, 12-11-16, top chalk 1475 ft, base 1810 ft, 6-in cas with pckr set at 1470 ft, tested dry, wo, td 1965 ft. Keatchie O&G Co.'s Smith 1, 31-14-15, sd 2350 ft. E. T. Oakes' Johnson 1, 3-13-15, base chalk 2160 ft, top another chalk 2815 ft, coring 2966 ft. Walters & Nicholson's Jim Guy 1, 3-11-13, sd 1260 ft. S. S. Meek, Tr.'s Wagner 1, se se 5-12-14, 10-in 101 ft, top hd chalk 1659 ft, base 2839 ft, cored sand and shale claimed oil show 2864-85 ft, sw 2887 ft, tested dry 2989 ft, dry abn 3104 ft.

LASALLE PARISH—Gulf Ref. Co.'s Tremont Lbr. Co. 1, ne sw 10-9-2e, 15½ cas 105 ft 12½ cas 940 ft, dr 3850 ft.

NATCHITOCHES PARISH — Mid-West Prod. Co. Inc.'s Brown 1, 34-11-10, dk. C. M. Talley et al's Talley 1, 29-11-10, sd 1380 ft. J. W. Cooper et al's Cooper 2-A, 35-11-10, sd 1515 ft.

OUACHITA PARISH—S. C. Wilson et al's W. L. Williams 1, sw se 5-16-1e, dk.

RED RIVER PARISH—Mack Jourdan Co.'s Lockett 1, 33-13-10, sd 2550 ft.

RICHLAND PARISH—National Gas Co.'s Singletary 1, 20-18-7e, sd 2515 ft.

SABINE PARISH—Langbridge Oil Corp.'s Stephens 1, se ne 17-9-11, elev. 303 ft, 6⅝ cas 3176 ft, after two ds tests showed oil at 3360 and 3380 ft, made two heads oil through cas totaling 25 bbls of 39.1 gravity after bailing, td 3626 ft. J. J. Kean's Belton 1, nw se ne 31-9-13, elev. 233 ft, 8-in cas 1590 ft, bailed dry, no show 1605 ft, bailed dry, very small show oil 1713 ft, ds recov., arr deepen, td 1720 ft, chalk rock. H. W. Perritt's Bowman-Hicks 5, 2-7-12, 10-in 100 ft, 6-in 2220 ft, dry at 2230, arr dr deeper. A. H. Thames' Edwards Est. 1, 8-8-13, sd 1200 ft. R. L. Gay, Tr.'s Long-Bell A-1, nw nw 10-8-13, sd 3853 ft. Coates Pet. Co.'s Bowman-Hicks A-1, sw se 1-7-13, 10-in 100 ft, dr 1225 ft; Bowman-Hicks 1, ne sw 2-7-12, oil show in Wilcox 1670 ft, top marl 2230 ft, top chalk 2300 ft, wosr 2441 ft; Sabine B-1, sw nw nw 1-7-12, 10-in 100 ft, top marl 2237 ft, top bro chalk 2255 ft, top hd chalk 2264 ft, 6-in 2237 ft, flowed est 500 bbls oil day for 2 days through 28/64-in choke with 75 lbs pressure, went dead, hole full fluid, 500 ft sw at bottom, wosr, td 2302 ft; Sabine 2, se nw 1-7-12, lcn; Stille 1, nw se 35-8-13, lcn; Hill 1, se se 35-8-13, lcn; Hale 2, nw sw ne 1-7-13, 10-in 100 ft, cemtd 6-in 2097 ft. Dengail Oil Co.'s Nulton 3, sw sw ne 1-7-13, lcn. Ohio Oil Co.'s Bowman-Hicks 9, 35-8-12, lcn; Bowman-Hicks 10, 35-8-12, lcn; Bowman-Hicks 11, 2-7-12, lcn; Bowman-Hicks 12, ne ne 2-7-12, rig. Diffie & Barrett's Lites 1, 34-8-11, 10-in 105 ft, sd. Hudson & Bird's Walden 1, sw ne 26-8-11, 10-in cas 100 ft, sd for water 1800 ft. Gerhig Co.'s W. F. Skinner 1, nw nw 16-8-11, dk and mov in rig. Hawkins et al's Moran 1, se ne 1-7-11, gauged 25 bbls day on beam, td 2620 ft. Hawkins & Antoon's Newton 1, 1-7-11, wosr 2610 ft. L. K. McGuffin's Byrd 1, 1-7-11, sd 400 ft. Zeke Lohman's McCormick 1, ne sw 2-7-11, sd 1606 ft. Ben Merritt, Tr.'s Byrd 2, 1-7-11, 10-in 88 ft, sd. Roy Baker's Sabine 1, 11-7-12, wosr 2548 ft. Gautier et al's Meshell 1, 30-8-12, wosr 2530 ft. Lanier & Dyer's Barthold 1, 35-8-12, wosr 2521 ft. Loring Oil Co.'s Bowman-Hicks 18, sw nw 15-7-15½ cas 100 ft, dr 3700 ft shale; Bowman-Hicks 19, sw ne 16-7-12, 15½ cas 101 ft, dry abn 2975 ft, chalk. G. M. LeGrand's Peterson 1, sw ne 34-7-13, 10-in 40 ft, dr 1650 ft. A. F. Tarver's Cutrer 1, 14-7-11, wosr 2550 ft. Crescent Drilling Co.'s Byrd 1, 12-7-11, 10-in 100 ft, dr 1800 ft. Lyons & Neely's Byrd 3, 1-7-11, 10-in 100 ft, sd 400 ft. Eddie Self's Jacobs 2, sw se 1-7-11, 10-in 100 ft, sd 1370 ft. Stovall Drilling Co.'s Nuton 2, 1-7-13, 10-in 100 ft, dr 900 ft. O. J. Baird's Duggan 1, se nw se 14-7-11, dk.

TENSAS PARISH—A. R. Willis' Curry 1, 39-11-12e, sd 3545 ft. L. A. Duvall et al's Martin Jacoby 1, ne ne 1-14-10, 10-in 200 ft, sd 2775 ft. Stovall Drilling Co.'s Miller 1, ne sw 18-10-10e, lcn.

UNION PARISH—Don Brooks, Tr.'s Douglas 1, ne sw 9-22-2w, 12-in 170 ft, top chalk 2317 ft, top red beds 3079 ft, sd 3509 ft gumbo.

VERNON PARISH — Exchange Pet. Co.'s White Grandin 1, ne sw 29-3n-7w, elev. 292 ft, 12½ cas 210 ft, dry abn td 2722 ft sandy shale.

TEXAS GULF COAST

Completions

Company, Well and Location	Initial Production Bbls.	Depth
WHARTON COUNTY—		
Barnes & Alexander, Hahn 1.....	*	1840

DRILLING REPORT

AUSTIN COUNTY — O'Hara et al's F. Nelius 1, dk 5 mi s Bellville. Pomical & Boletka's F. Schbajsa 1, lcn 3 mi s Bleiblerville.

BRAZORIA COUNTY—Texas Co.'s Belcher 2, Manvel dist, dk; Belcher 1, Manvel dist, H. Little sur, flwg 162 bbl. United Oil Synd.'s Levitt 1, 3 mi n Danbury, td 1600 ft, pulling on st dr stem.

BURLESON COUNTY—Marek & Son's A. Marek 1, 2½ mi sw Tunis, dr sh 1632 ft. Marts et al's Boyett 1, 5 mi se Wellbourne, dr hd sn 2934 ft. Mid-South Oil Co.'s Duckworth 1, near Clay Station, sd at 3070 ft.

FORT BEND COUNTY—Cullen & West & Gulf Prod. Co.'s George 2, cmt 6⅝ cas on O. S., stg; Lockwood Sharp 2-A, Thompson dome, O. S. 5090-5100 ft; Lockwood-Sharp 3-A, dr 3190 ft; Lockwood-Sharp 4-A, dk. Stone & Wyman's Beard 1, between Long Point and Damon, dr 1262 gbo.

GALVESTON COUNTY — Yount Lee Oil Co.'s Cade 20, spd & sd; Cade 22, High Island dist, 4990-5020 ft, hd sn shwg o; Cade 23, dr 3355 ft sndy lime.

GRIMES COUNTY—Rianjo Oil Co.'s Cuthrell 2, 3 mi e Carlos, Pat O'Connor sur, dr 2935 li rk, small shw g.

HARRIS COUNTY—H. H. Givens & Daybault's Lobit 1, Addicks dist, 18 mi w Houston, dr 2243 ft. Gulf Prod. Co.'s Taylor 33, Pierce Junction dist, dr gbo 978 ft. Highlands Pet. Corp.'s Haney 1, 5 mi w Barbers Hill, dr 4940 ft sh.

HILL COUNTY—C. Hauseman's Griffith 1, Waddell sur, sd 3075 ft.

HOUSTON COUNTY — Apex Dr. Co.'s Thompson Bros. Lbr. Co. 1, 6 mi s Lovelady, sd 2365 ft, prep to set 6⅝ in cas.

JACKSON COUNTY — Chicago Gulf Co.'s Drushell 10, Edna dist, dr 2589 ft li and sh.

JEFFERSON COUNTY — Humble O&R Co.'s Ross B. Nelson 1, 4 mi se Cheek, ru. Jno. I. Pipkin & Elam's M. Broussard 1, 2 mi w Sabine, dk.

MATAGORDA COUNTY — Harvey Smith's Boker 1, Citrus Grove dist, ru. United North & South Oil Co.'s Stoddard 1, Buckeye dist, dr 1150 ft.

MONTGOMERY COUNTY—Humble O&R Co.'s Renn 1, 4 mi s Magnolia, dr below 2900 ft. Geo. W. Strake's South Texas Dev. Co. 1, 2½ mi se Conroe, dr 3700 ft. Wilhite et al's Sealey 1, 5 mi w Conroe, Peaveyhouse sur, ru. Stanolind O&G Co.'s R. M. Gray 1, lcn 1 mi nw Dobbins.

NACOGDOCHES COUNTY—Ginter et al's Neil Wells 1, M. H. Chireno sur, 15 mi se Nacogdoches, dr sndy sh 338 ft. Hayter, Whited & Mast's G. L. Muckelroy 1, Martinsville dist, dr sh 3686 ft.

ORANGE COUNTY—Crews Oil Co.'s Mansfield 1, Orange dist, td about 1700 ft gbo washing to bottom. Texas Co.'s Polk Kuhn Glass Co 1, Port Neches dist, 1675-80 ft sn and sh shwg oil, dr ahead below 1860 ft.

POLK COUNTY—T. B. Hoffer et al's Saner Rageley Lbr. Co. 1, 6 mi w Corrigan dr sh 1189 ft.

WASHINGTON COUNTY—Penn Tex Oil Co.'s Kansas 2, Brenham dist, dr anhy and li 3487 ft.

WHARTON COUNTY—W. H. Wallace's J. N. Lee 1, 2½ mi w Lissie, dr gbo 2200 ft.

EAST TEXAS

Completion

Company, Well and Location	Initial Production Bbls.	Depth
SHELBY COUNTY—		
Smith et al, Carroll 1, J. A. Parker sur	*	3240

HARRISON COUNTY — Ryan Cons. Pet. Corp.'s J. M. Furrh 1, T. J. Copelain sur, rig. J. M. Gholson's Bivins 1, T. D. Peterson sur, sd 3085 ft. Lloyd Oil Corp.'s Timmons 1, Jno. Findley sur, 10-in 240 ft sd for fuel 3432 ft bro lime.

MARION COUNTY—Rondeau & Hindman's Lindsay 1, Alex. Albright sur, sd 2450 ft. J. W. Hamilton's Wood 1, Alex. Albright sur, sd 2380 ft. Claunch et al's Laun 1, Henry Fulgram sur, sd 300 ft. Sheldon et al's Brown 1, E. B. Fowler sur, sd 3750 ft.

PANOLA COUNTY — Dillon & Bradham's Baldwin 1, Hampton West sur, sd 1555 ft. United Prod. Corp.'s Steele 17, B. C. Jordan sur, lcn (Trinity test). Werner 11, D. B. Lewis sur, 15½ cas 383 ft 9-in 3525 ft dr 3863 ft hd lime. Daisy O&G Co.'s Rucks Hrs 1, Jno. Palmer sur sd for water 3264 ft shale. Moses & Wallace's C. L. Daniels 1, Isabel Hanks sur, sd 650 ft. Hoffer et al's Cameron 1, W. A. Lagrone sur, dk. Davidson et al's Latham 1, Wm. Rich sur, rig up for deep test, td 550 ft. Nelson et al's Williams 1, Jas. Hanks sur, 12½ cas 400 ft sd 2250 ft lime. Stamps et al's Chadwick 1, Wm. Scantleberry sur, rig.

SHELBY COUNTY—E. L. Chapman's Holt 2, Matthew Moore sur, claim sand core, sd 3127 ft (formerly owned by Chapparal Oil Co.). Pickering Lbr. Co. 1, C. F. Henry sur, blew out est 25 mil ft gas, killed and set 365 ft 7-in cas, co arr set cas td 3983 ft. McRobie et al's Windham 1, Wm. Leach sur, 296-ac tract 12½ cas 276 ft top chalk 1930 ft 8¼ cas 1750 ft tested dry small show gas at 2282 ft in chalk rock, dr through liner 2460 ft chalk rock. Maulding et al's Frost Lbr. Ind. 1, A. B. Fountain sur top PG 2900 ft dr 3246 ft chalk. H. H. Gracey's J. A. Morrison 1, Wm. English

sur, sd 2600 ft. I. M. Bradley et al's J. J. Asberry 1, G. W. Mitchell sur, sd 3280 ft sandy lime. C. H. Tautenhahn's J. C. Bogard 1, Thos. Baker sur, partly rigged up sd 20 ft. Ridgeway et al's Polley 1, Domingo Gonzales sur, sd wo cas 405 ft. K. H. Francis' Jno. Mims 1, Mary Smith sur, 13⅜ cas 40 ft 10-in 393 ft top Midway 847 ft sdtr ds at 2000 ft fsh junk at 2200 ft old td 2805 ft. Smith et al's Carroll 1, J. A. Parker sur, 10-in 180 ft dry abn td 3240 ft lime. United North & South Prod. Co.'s Windham 1, A. H. English sur, 171.5-ac tract sp 12½ cas 376 ft dr 391 ft. J. E. Stock's Pickering Lbr. Co. 1, Jones Harrison sur, sd 400 ft.

SOUTH TEXAS

ATASCOSA COUNTY—Glen Mathis' Mrs. G. M. Martin 2, Navarro sur, 3 m s Amphion, 100 ft sw No. 1, sd 2980 ft.

BASTROP COUNTY—W. A. Allen's Birmingham 1, King & Millett sur, dr 1220 ft last report. Mid-States O&G Co.'s Wickmann 1, Castleberry sur, to deepen. Texas Dev. Co.'s C. H. Ray 1, Thos. Christian sur, 1½ mi ne Elgin, sd 100 ft.

BEE COUNTY—Houston Oil Co.'s J. F. Portis 2, A. Smalley sur, sw Pettus pool, lcn. J. C. Hughes et al's P. H. Martin 1, John Lyford sur, just s Holzmark pool, prep to spud in. Humble Oil and Ref. Co.'s Laura Thompson 1, Garrett Roche sur, dr 2220 ft. Lefevre & Buchanan's Geo. A. Ray 1, elev 342 ft, Jno. A. Williamson sur, 2800 ft w Damac Producer, sw Pettus pool, sand cored 3888-3908 ft, set csg 3886 ft, completed 2000 bbls. J. S. Mauldin's Mauldin 1, G. A. Kerr sur, just s Pettus townsite, sd 3930 ft. T. B. Slick Estate's Geo. A. Ray 1, elev 329 ft, G. A. Kerr sur, sw Pettus pool, sand 3931-39 ft, set csg, show oil, could not complete, cored to 4135 ft, abn; Geo. A. Ray 2, Geo. A. Ray 3, Geo. A. Kerr sur, lcn. United Prod. Co.'s Ray 39, T. Hanson sur, just ne field, dr 6495 ft. H. H. Weinert's Geo. R. Ray 1, Jno. A. Williamson sur, sw Pettus pool, w of Damac well, lcn.

BEXAR COUNTY—J. E. Anderson's Suburban Irrigated Farms 1, C. Logan sur, near Kirk,20 mi sw San Antonio, on Chicon Lake fault, dr 965 ft. Gatlin Oil Co.'s Beck 9, A. Montez sur, lcn. Ewell Neill's J. M. Watson 1, Martinez sur, 10 mi s San Antonio, sd 1100 ft. W. S. Rogers et al's L. Dunlop 1, Juan Montez sur, sd 612 ft. Schneider, Rees et al's Claussen 1, 12 mi no San Antonio, SJ&A sur, No. 17, sd 863 ft. Tri-State Oil Co.'s Carruth 1, F. Bolen sur, sd 770 ft. Whipple et al's Gemblers 1, nw Dobrowolski dist, lcn to be made.

BLANCO COUNTY—Hardy Sitton's Standeford 1, sur 155, 3 102 nw Blanco City, no report; McMillen 1, Benjamin Williams sur No. 125, 2 mi Blanco City, sd 686 ft. Forest Oil Co.'s (Rosenfield et al) Hohenberger sur No. 94, sd 712 ft. Thomas Hicks et al's Specht & Wiedner 1, This. M. Fowler sur No. 27, 2 mi s Twin Sisters, dr 1140 ft.

CALDWELL COUNTY—Joe Bruner's Malone 1, A. Floyd sur, 2 lcns s Salt Flat, oil coming through mud, prep to complete, csg set 2396 ft, td 2572 ft, mi se Lockhart, spudded and sd acct water. Ralph Ogden's Mrs. Sue Nelson 1, John B. Gray sur, Larrimore pool, 3 mi n Lockhart, top Edwards 1297, td 1299 ft, show little oil and sulphur water, deepening. John Storey's McMahon 1, Mills-Chapman field, Pinchback sur, lcn.

COMAL COUNTY—Caldwell & Lanier's T. J. Byler 1, 10 mi s Blanco City, HE&WT Sur No. S-894, sd 754 ft.

DE WITT COUNTY — Gibson & Strum's Clark 1, Dolores Alderete sur, 3 mi s Yorktown, ru and sd. (Dropped).

DUVAL COUNTY—Cole Pet. Co.'s Benavides 70, blk 8, sur 19, e of Cole field, sand 1730-36 ft, set 6⅝§ csg 1730 ft, complete 100 bbls; Beanvides 71, blk 8,, Sur. 19, Mariano Arispe Grant, dk. Frank Garvis' Shallert 1, Palangana Salt Dome, sur 255, sand 1446-50 ft, set csg 1448 ft, woc, Magnolia Pet. Co.'s Wilson 5, Sec. 134, S&O pool, sand 2390-2416 ft, show oil, csg set 2390 ft, woc. SR&C & Vacuum Oil Co.'s Duval Land & Cattle Co. 5, sur 293, SRC pool, ru. Southern Gas Utilities Co.'s A. Benavides 1-E, nw cor sec 173, set 6⅝§ inch csg 2433 ft, sand 2433-38 ft, td 2451 ft, complete 35,000,000 cu ft gas, 1000 lbs. pressure. Thomas & Tarver's Bishop Land & Cattle Co.'s Welder Wood 1, 16 mi from S&O

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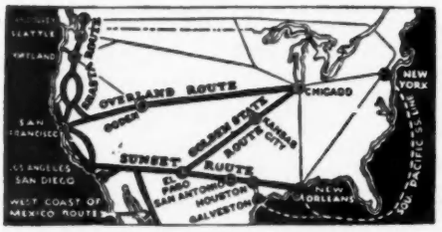

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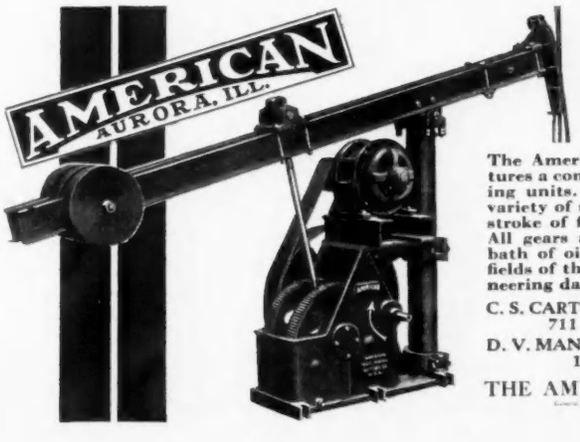

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pool, sec 269, Welder-Wood ranch ru. The Texas Co.'s Bishop Duval Land Co. 3, sur 135, S&O pool, lcn.

FRIO COUNTY—Arthur H. Wray's Roche 1, sec 123, A. Hutzler sur, near Big Foot, 1500 ft sw Burns 1, td 2404 ft, making new ds test.

GOLIAD COUNTY—Plymouth Oil Co.'s Parks 1, 2900 ft se Givson Parks 1, ru. Stanolind O&G & John F. Camp's Pettus 2, abt 2000 ft nw Pettus 1, ratholing 4230 ft.

GUADALUPE COUNTY—Harry Bruner's Jim Sherrill 2, Geo. Allen League, near Staples, sd 190 ft for rotary. John F. Campis Dan Denman 1, Wm. Arrnigton sur, 2500 ft s Camp well, top chalk 2256 ft, hit crevice 2400 ft, hole full oil on ¼ choke in 10 min, set 6⅝ inch csg, woc. Humble Oil & Refining Co.'s Dan Denman 1, Wm. Arrington sur, 900 ft s Camp producer, top chalk 2214 ft, dr. W. M. Eiser et al's Wells 1, ne quarter Jose de la Baume sur, dk. Bornhill & Breavers, Hoffman 1, near Gonzales road, dk. C. McGarity et al's August Wesch 1, H. M. Thompson sur, No. 89, 2 mi n Marion, sd 1200 ft. Schleter, Atherton & Armstrong's Ogletree 1, Robt. Smith sur, 1 mi n old Luling field, sd 1745 ft.

HAYS COUNTY—J. C. Jones et al's Byler 1, John Ingram sur, 15 mi nw San Marcos, sd 925 ft.

JIM HOGG COUNTY—Cole Pet. Co.'s Palacios 1, blk 14, sur 231, 3 mi s and e Randado field abnd 2430 ft.

JIM WELLS COUNTY—Larcro G. & Pet. Co.'s Wade 2, 800 ft s No. 1, Larcro gas field, sd 2355 ft. Stanolind O&G Co.'s N. A. Hoffman 1, La Trinidad sur, 4½ mi sw Ben Bolt, dr 4147 ft, hard shale.

KARNES COUNTY—V. F. Neuhaus's L. L. Russell 1, C. Martinez sur, just n Kennedy-Runge Highway, move on rig. Jones et al's (J. Morrissey) Cochran 1, D. B. McConnell sur, w Kennedy, to re-dr 1012 ft. United North & South Dev. Co.'s Morrell 1, Carlos Martinez, 7 mi sw Kenedy, set 10-inch csg at 83 ft.

KENDALL COUNTY—Borgett et al's W. Hagg 1, w Avery sur, sd 1250 ft. F. S. Dibble's Ellebracht 1, TW&NG sur No. 77, 12 mi n Sisterdale, sd 50 ft. Dixon Oil Co.'s Behr 1, Jessie Wilson sur, 3 mi s Sisterdale, dr 2713 ft at last report. R. M. Perkins' (W. H. Sartain) Lawhorn 1, 30 ft sw original test, D. L. Richardson sur, sw Kendalia, no report. Hardy Sitton's W. B. Garvin 1, D. L. Richardson sur, 1 mi ne Kendalia, sd 1480 ft.

KERR COUNTY—Evans and Gant's Seiker and Mears 1, CCSD&RGNR Ry. sur, sec 1605, 2 mi ne discovery, sd 4031 ft sandy shale. Jeff Love 1, J. Martinez sur No. 1594, sd 4060 ft, brown lime. Evans and Sprinkle's Jeff Love 2, sec 1592, ½ se discovery, set csg 3260 ft, now sd. Chester A. Martin's J. E. Young 1, A. E. Bruce sur, ne discovery, 1310, move on 12½ inch csg.

LA SALLE COUNTY—Buckley Ranch O&G Co.'s Buckley et al 1, sur 37, Buckley-Walling ranch, dr 2850 ft. Salt Lake City Oil Co.'s J. F. Mayes 1, sec 19, blk 20, I&GN sur, dr 1100 ft.

LIVE OAK COUNTY—Henderson Coquat et al's H. Hewitt 1, Thomas Adams sur, sec 4, sd 445 ft. Shimmel & Botts' (Texas Pet. Co.) Terrell 1, s Fort City, ru.

MAVERICK COUNTY — I. N. Boicourt's Bandera School Land 2, sd 2284 ft. Texas Gas Utilities Co.'s Chittim 8, sec 129, blk 7, I&GN sur, Chittim field, sd 4810 ft.

McMULLEN COUNTY — A. E. Adams' Martin 1, L. E. Melon sur, 15 mi sw Tilden, td 750 ft, no report. Brodie, Shearer and Emerich's Shiner 1, Henry Brewer sur, 12 mi se Tilden, sd 2006 ft.

MEDINA COUNTY—Frank A. Brown's Jacob Fohn 1, J. F. Tony sur, 8 mi s Hondo, fsh 922 ft. National Oil Co.'s 1, lcn being made.

NUECES COUNTY—Gulf Coast Oil Co.'s Sagarin 1, sec IV9, Kinney sur, Saxet field, dr 4272 ft; Elder 1, nw Harel 1, Saxet field, dr 4856 ft gumbo. Neal-Milton & Kepley Prod. Co.'s Roark 1, 2000 ft nw Saxet Dunn 8, Saxet Field, sand 4825-32 ft, show 55 fourbles pure oil on dst., made sw when dr in, now work on well. Saxet Oil Co.'s Dorigan 5, lcn. Stanolind O&G Co.'s (Southern Crude Oil Purchasing Co.), Saxet field, Chas. E. Stratton 1, sec 12, Stratton sub, P. Anchow sur, 6 mi s Agua Dulce, sd for orders, td 4765 ft. L. L. Smith's Alexander 1, Saxet field, dr 4520 ft, sand.

SAN PATRICIO COUNTY—Atlantic Oil Producing Co.'s Welder 1, on Welder ranch, about 10,000 ft sw Aransas gasser, lcn. Welder Oil Corp.'s Welder 3, 900 ft ne No. 2, Welder Gas field, sand 3651-61 ft, dst show 1100 lbs. pressure in 12 min, now sd. Saxet Oil Co.'s Rachel 18, White Point, dig pits, move on rig.

STARR COUNTY—Los Olmos O&G Co.'s Seabury 1, Porcion 75, testing, 6-inch csg set 366 ft. Lorn Smith's Kelsey Bass 1, sur 7, sub of Porcion 75-76-77, lcn. Hook and Werner's Kelsey 2, blk 2, sur 6, sub of Porcion 75-76-77, completed 25 bbls, sand 484-500 ft, 4½ inch csg set 484 ft. San Marcos Dev. Co.'s Ivy 1, 1 mi w Olmos pool, show oil 320 ft, now dr 390 ft.

VICTORIA COUNTY—C. R. & M. Co. & C. B. Bunte, Inc.'s, C. R. Keenan 1, center 2500-acre ranch, spud in. Houston Oil Co.'s Konrad 1, T&NO Sur, on Beck Salt Dome, n Victoria, dr 5175 ft. The Texas Co.'s McFadden 3, John M. Pine sur, nw No. 2, dr 4425 ft. United Prod. Co.'s McFadden 5-A, C. L. Mann sur, ne No. 4-A, sand 3754-59 ft, csg set 3746 ft, plug to 3761 ft, td 3828 ft, complete 60,000,000 cu ft gas 1100 lbs pressure on ¼-inch choke.

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Letters of Paul Peebles, P. S. G.

▼ ▼ ▼

My Dear Cleopatra:

Well, Cleo, hon, I guess you seen I did not get to come down to see you like I said maybe I wouldn't because I had to stay close to the situation because it changes so fast that I cant even tell the oil business where to go from here because it wont stay where it is long enough to know where it is at. I guess you aint bin reading no papers or nuthin to see how things have bin getting along in the world, so I will review them some for you so you can understand what I am talking about.

Well some of the newest news is that President Hoover has done something or other to unfreeze the banks, only one fellow in a bank where I went to see about getting some money aint heard nothing about it and is still froze when I ask him for credit, but I guess it is alright for some people even if it does not work for me. If the president's new bank will take some gasoline accounts which some of the oil company's have got with their courtesy cards well maybe they can build a few more stations. It is several corners left which would be likely locations and since they have three kinds of gasoline to sell now they need a few more places to go broke at.

Well then the next big news besides Louisiana having a serious overproduction of governors, is that Gov. Murray has got off the lid in Oklahoma. Seems like that was some kind of a credit move too. You see the bankers up there went to the governor and told him that they was real put out because the oil well owners was not paying them none and maybe if they could run some oil they could maybe at least pay some interest on their notes whether they was making any money or not. And besides it was not enough soldiers on the payroll to make up for a lot of oil field workers which was laid off, so Murray decided that dollar oil was not so close so he let them run some only he is sticking around pretty close watching how it goes. He has been talking about Oklahoma going in the gasoline business but I guess that would not do because the state would not sell on the credit and it has been agreed by all the marketing companies that they can not sell no gasoline except if they give their customers a credit card and the choice of three kinds of gasoline. So that is that and Oklahoma is again a leading oil producing state but afraid if they brag about it the soldiers will close them down again so maybe they will keep quiet.

Well then the next big thing in the news is a injunction stopping the soldiers and Jake Wolters from shutting in the wells in East Texas. Well you just ought to see how that worked. Mixed up in it some how is a company which had five wells and a desire to get some oil out of them. So they hired them a lawyer and he got the court to say that a temporary injunction said that them five wells should be run by the people what claims them without no advice or consent from no corporals. Well Governor Sterling had just finished saying that marshall law was working alright and he was going to keep it working, so when he heard that the commission and the soldiers had been ordered to leave them wells alone, well he sed he was wearing about the biggest britches there was in sight and told the commission if they was afraid of the court they could go on a vacation and him and Jake would run it. Then he sent the rangers over to take charge of them particular wells and they is closed down and all the rest of the wells in the field is making only 165 barrels per each and if they make any more everybody in sight will go in the guard house.

Well all I can find out about it is that some people like it and some dont and some is saying what they think and some has got sense enough to just grin. Nearly everybody says it is against the constitution and the by-laws and magna charta and the Monroe doctrine, but they is kinder like a fellow I heard about once what his lawyer told him they could not put him in jail when he was already locked up. It seems like now if they get a injunction to call the soldiers off they send in the rangers, injunct them off and they will use sheriffs, and then constables and after they have sent in the boy scouts well I guess the governor himself will go up there and keep the wells in line, and only 165 barrels per day as long as it aint too many wells, and the way they keep on drilling pretty soon it will be to a average of only 1 barrel per 1 well if they want to keep down under 400,000 barrels.

The trouble is honey that those guys up there are not using their heads like they would if they would come to me for advice. I could tell them how to handle the situation and keep in the law and still not use too many men on the payroll on account of it seems like the idea is that the way to get business back to normal is to use as few men as possible on the payroll and then pay them just as little as they can get them to work for. It is a endless circle you see and the logic is that if you have a lot of men not working they will not have no money to spend and every time you put another man in the no spending class well that much closer is normal business because that makes things cheap. Then to prove that they point to the fact that talk is cheap and the telephone company is making the biggest dividends because everything else except talk is cheaper than it was. That is so, even if you do laugh.

Well my scheme for East Texas is this. The rule is that you can have one (1) well on twenty (20) acres and it can make 165 (one hundred sixty-five barrels) of oil and no more and if it makes less you are liable to court martial. Well a well up there is good for around 6000 barrels per day without much bragging and they are drilling over 100 a week and it aint but mighty few that is living so wrong that they dont get oil if they drill for it. Of course all that drilling costs money and it gives men work which latter is of great concern to the captains of industry which thinks things will be better when we get things unitized and standardized and machinized and magnetized or something to where the pres. of the co. can press a button and do all the work without even going down to the office, and wont no men be needed except to patrol the field to see that the law is being obeyed.

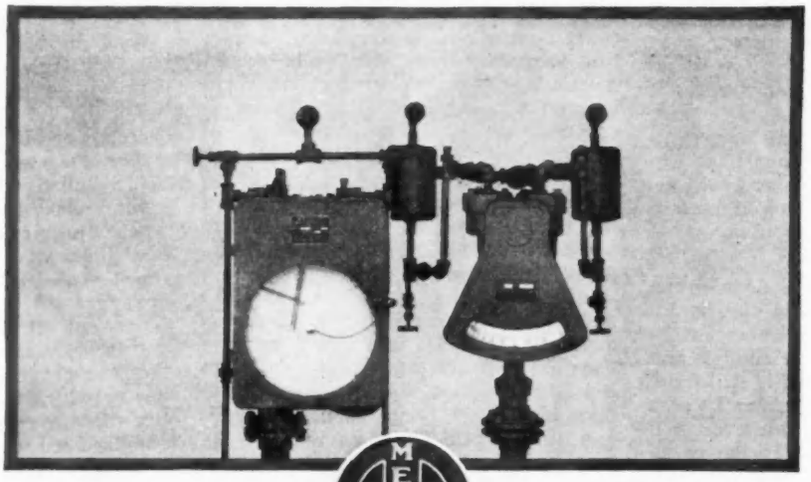
Well already somebody has figgured out that it aint no sense in drilling a regular oil well to just get about 1/40 of the production so they are drilling little holes. Next step will be diamond holes with merchant pipe for casing, but my scheme is cheaper than that.

Well what is a well? Well a oil well is a well which oil comes out of and it aint dependent on how deep is the well or how did the oil get in it, so my scheme is to tap the casing of a regular well under the ground and run off a pipe to as many 20-acre tracts as you have, up to 40, then tie into a pipe which is stuck down about 20 feet (I have seen a lot of wells which wasnt moren 10 feet deep and made lots of water and even a court would say it was a well) and let the oil come out. That would comply with all the requirements of law like it says on a cigaret package and would be a whole lot cheaper than hiring lawyers and following them way off across the state to find three judges which could set down peaceful together while the football teams of the colleges they went to was out on the field dying for old Siwash. You see honey how it is one judge can work all year on the 18th amendment but they have to have three for the 14th because it says itself something about due process of law while all the others is just subject to appropriate legislation.

Well honey I guess this is all getting to deep for you and anyway I am tired now and have run out of paper. Hoping you are the same.

Your loving Paul.

FOR BETTER BALANCE OF FLOWS



Gas from Absorbers is accurately measured, and permanent charts obtained, with this Westcott Orifice Meter (at the left).

In the same California refinery, Metric Indicating Flowmeters accurately report the flow of oil (Flowmeter at the right).

"We use your oil and gas meters together", writes the superintendent of a prominent oil company, "as a balance on flows from absorbers."

One more interesting example of the applicability of Metric devices to varying demands.

Where indications alone are needed, Metric Indicating Flowmeters.

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Either instrument is highly practical for the accurate measurement not only of oil or gas but also of air or steam.

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New Equipment for the Field

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▼ ▼ ▼

Automatic Unloader

ELECTRIC MACHINERY MANUFACTURING COMPANY

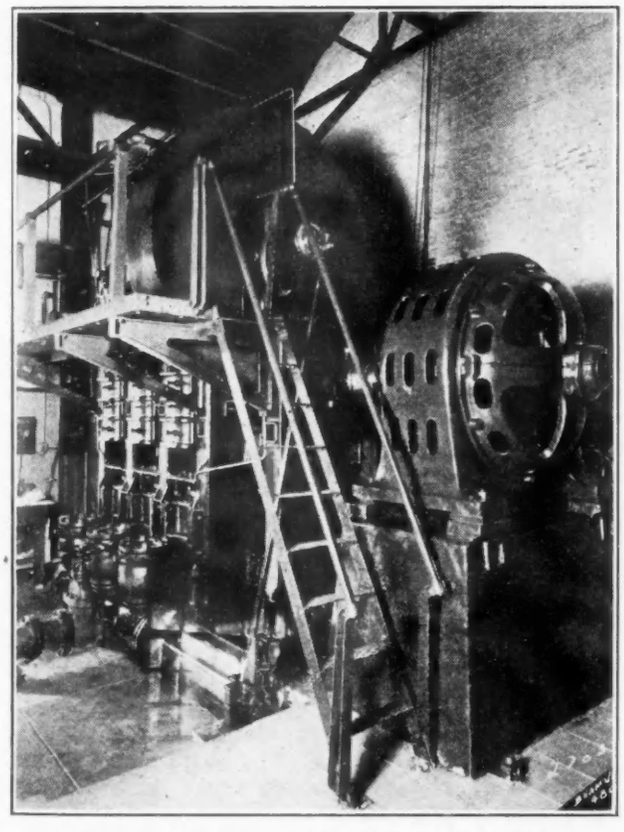
Electric Machinery Manufacturing Company, Minneapolis, has installed a synchronous motor drive for a triplex reciprocating pump equipped with an automatic unloader which works in conjunction with the motor control to unload the pump automatically. The motor is 250 H.P., 720 r.p.m. The unloader is of the Holveck type.

With the automatic unloader, working in conjunction with the frequency responsive control, the entire starting operation is made automatic, it being necessary only to push the start button.

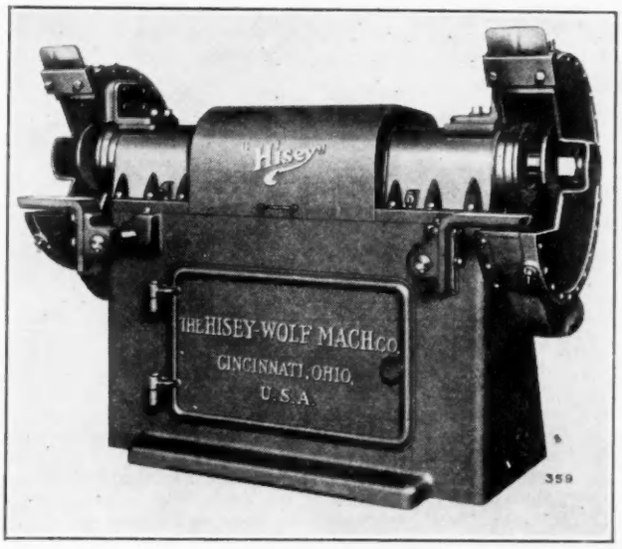
A magnetic solenoid operating a pawl controls the rotation of a cam shaft for holding open the suction valves. The lifting cams are operated by rod connection eccentrically to the pump crank shaft. When the solenoid is de-energized the cams are so rotated that the suction valves are held open during the normal pumping stroke. When the solenoid is energized the cams are rotated away from the suction valve lifts and stopped to permit regular pump operation.

By use of this unloader for synchronous motor driven reciprocating pump, the following advantages are claimed by the manufacturer: permits continuous operation without attention, regardless of momentary power dips which would otherwise shut down the pump; simplifies starting, and makes possible automatic start and stop operation to maintain the desired liquid level or pressure in the tank.

Complete information may be obtained by writing Electric Machinery Manufacturing Company, Minneapolis, Minnesota.



Electric Driven Pump with Automatic Unloader



Hisey Grinder

Heavy Duty Snagging Grinder

HISEY-WOLF MACHINE COMPANY

Hisey-Wolf Machine Company, Cincinnati, is producing a heavy duty snagging grinder which affords independent speed control for each wheel, permitting operation of both wheels at the most efficient and economic speeds.

The machine is manufactured for 20, 24 and 30-inch grinding wheels, either high speed or vitrified, with spindle speeds to correspond. Ball or Timken roller bearings are optional. A V-belt drive is used so that it may be hooked up to any standard motor.

Complete details on the heavy duty snagging grinder may be obtained by writing Hisey-Wolf Machine Company, Cincinnati, Ohio.

"Fleetweld" Electrode

LINCOLN ELECTRIC COMPANY

The Lincoln Electric Company, Cleveland, announces the introduction of an improved, heavily coated electrode for welding within the shielded arc on mild steel. Like its predecessor this electrode will be known commercially as "Fleetweld."

The new electrode, as compared with the old, insures a higher ductility of weld metal, 20 per cent to 30 per cent elongation in two inches. The tensile strength of coupons will be increased about 10 per cent with this electrode, to

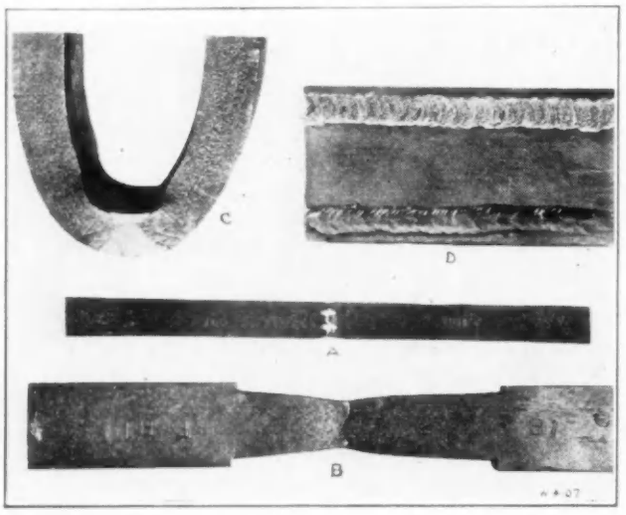


Figure 1. Test coupons made with the new improved Fleetweld. A Tensile test: (Steel plate butt weld ground flush and drilled). Weld failed at 75,000 pounds per square inch. B Ductility test: (Weld metal). Elongation in 2 inches, 27 per cent. Note "necking" at fracture. C Bend test for ductility: (Steel plate with butt weld). Elongation of outer fibres 43 per cent. D Resistance to corrosion: (Ordinary and Fleetweld beads immersed in 50 per cent solution of hydrochloric acid for 72 hours). Lower bead made with shielded arc shows no effects of corrosion

averages between 65,000 and 80,000 pounds per square inch. Resistance to corrosion, greater than mild steel, is also noted. There is little "spattering" with the new electrode. Test coupons are shown in the attached photograph (Figure 1). "A" shows a coupon pulled for tensile strength. This test consisted of a steel plate butt welded and the weld ground flush with two holes drilled to insure fracture at the weld. It required a pull of 75,100 pounds per square inch to break this coupon. "B" shows ductility test. This coupon of pure weld metal was pulled to destruction, showing an elongation in two inches of 27 per cent. C shows a bend test for ductility. Here two steel plates were butt welded and bent. The elongation in the outer fibres was 43 per cent. Resistance to corrosion of welds made in the shielded arc is shown in D. A bead made with ordinary metal and a bead made with Fleetweld on a steel plate were immersed in a 50 per cent solution of hydrochloric acid for 72 hours. The lower bead, made with Fleetweld, shows better resistance to corrosion than the plate itself.

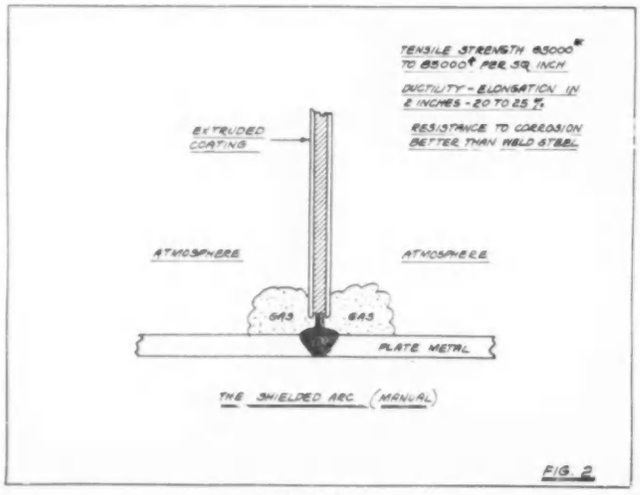


FIGURE 2

The shielded arc process (Figure 2) utilizes a heavy coating on the outside of an electrode of mild steel of proper specifications. This coating, burning in the arc less rapidly than the electrode melts, forms in effect a crucible around the arc, protecting it for almost its entire length. As the coating burns it gives off the oxidizing gas which prevents oxygen and nitrogen in the ambient atmosphere from reacting with the molten metal. The shielded arc process, eliminating oxides and nitrides in this manner, offers improved ductility, tensile strength and resistance to corrosion. With the shielded arc process porosity is avoided and the layer of easily removable slag, the residue of the burning coating, forms a protection for the hot metal while cooling.

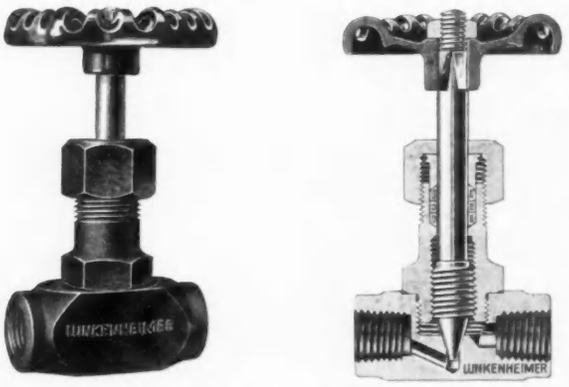
Fleetweld was first introduced, after years of research, in 1929. The new Fleetweld merely increases the efficiencies of the shielded arc process. The heavy coating is of special composition material, the metal core is drawn to rigid specifications and selected and tested. The new electrode will be produced in diameters from one-eighth inch to three-eighths inch and in two lengths, the standard 14-inch, and the special 18-inch.

Steel Needle Valves

LUNKENHEIMER COMPANY

Lunkenheimer Company, Cincinnati, recently placed on the market two steel needle valves for high pressure gas or liquid service, designed to give accurate throttling and regulation at pressures up to 3000 pounds at 150° F.

The construction is heavy, with extra long pipe threads,



Lunkenheimer Valve

rendering them practicable for use on orifice meters and other high pressure instrument lines.

The valves shown herewith are identical in design, with steel body, hub, stem, stuffing box and gland. Figure 1728 has bar steel body and is Parkerized. Figure 1730 is made of stainless steel and is intended for use in localities where corrosive fumes are present in the atmosphere.

Complete information on these two valves may be obtained by writing Lunkenheimer Company, Cincinnati, Ohio.

Acid-Proofing Substance

THE SULLIVAN COMPANY

The Sullivan Company, Memphis, has perfected a product known as "Acitite" for acid-proofing cement mortar joints, cement coatings and the like. The manufacturer claims it is immune to sulphuric, muriatic, hydrochloric and other strong acid solutions.

Detailed information on the product may be obtained by writing The Sullivan Company, Memphis, Tennessee.

Manufacturer and Supply Dealer Notes

▼ ▼ ▼

Oil Center Tool Company, Houston, announces the appointment of Clyde S. Graham as an addition to its East Texas sales force. He is making his headquarters at Overton. Graham began his oil field training in 1919 on a lease of Humble Oil & Refining Company at West Columbia, with his brother, Guy Graham, now secretary-treasurer of Navarro Oil Company, Houston. Following several years of field work he changed to the supply end and in the past seven years has been associated with a number of supply companies. Prior to coming to East Texas last spring he served Lucey Products Company for two and one-half years in the Gulf Coast.

CLYDE S. GRAHAM

International-Stacey Corporation, Columbus, Ohio, has transferred B. T. Ehrnman, formerly located in the Chicago office of the International-Stacey Corporation to St. Louis as division manager, with offices at Room 2192 Railway Exchange building.

Mr. Ehrnman has been associated for a number of years with the Roots-Connersville-Wilbraham division of this company in the sale of gas pumps, meters, blowers and other equipment. With the opening of the St. Louis office he will also have charge of the sale of Ideco oil and gas drilling and pumping equipment, Stacey Brothers Telescopic, "Bullet" Pressure and Stacey-Klonne Dry Seal gas holders, Ideco standard steel buildings, Ideco airport and airway equipment and Ideco electrical equipment, in addition to the Roots-Connersville-Wilbraham line of products.

Busch-Sulzer Brothers Diesel Engine Company is running on test beds at the St. Louis factory this month two new types of Diesel engines which represent outstanding developments. One of the engines being tested is the world's largest airless injection cylinder Diesel, with a bore of 30 inches and a stroke of 42 inches, giving a gross horsepower of 4000 in the six cylinders. The other is the world's largest two cycle trunk piston Diesel, also fitted with airless injection, having in 10 cylinders a gross horsepower of 3300.

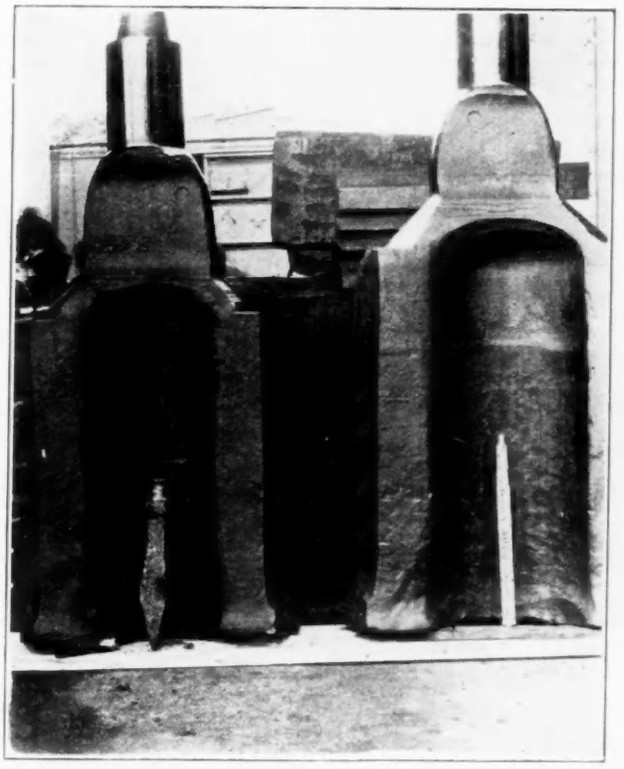
Oil Field Engineering Company, Fort Worth, has recently purchased the patents on the Hensler and Canniff sucker rod and tubing sockets and will shortly begin manufacturing and distributing these two products at its plant at West Rio Grande Avenue and Frisco Railroad tracks, Fort Worth. Literature on these new sockets added to the line of Ofeco products, will be available within the next few weeks by writing the manufacturer at P. O. Box 414, Fort Worth, Texas.

Anchor Post Fence Company announces removal of Houston offices and warehouse to 733 Merchants and Manufacturers building, No. 1 Main Street, Houston, Texas.

The National Oil Scouts Association of America, Incorporated, has recently published and put into circulation among its members the Year Book of 1931, covering oil and gas developments prior to and during 1930 in the states of Texas, Louisiana, Mississippi, Southern Arkansas and Southeastern New Mexico.

The book is an attractively bound volume comprising 327 large pages of material, illustrated with numerous maps, cross sections, charts, diagrams and drawings; and it is really a composite edition in which are consolidated the contents of separate books on the different districts previously published by the scouts through their district organizations.

The table of contents divides the material of the book, consequently, into eight major sections, each of which treats petroleum developments in a separate major unit of oil country. The first division of the book deals with the Texas and Louisiana Gulf Coast region, and this section occupies a larger portion of the book than any other, beginning on page 5 and continuing through page 128. A detailed review of the contents of the Gulf Coast material as published previously in a



Above are shown two cable tool drilling bits recently turned out for a special water well drilling job by the Acme Fishing Tool Company at Parkersburg, West Virginia.

The big one on the right is a 36-inch bit, weighing 6000 pounds. The shiny object leaning against it is a 2½-inch bit weighing 10 pounds.

Leaning against the large bit at the left is a 60-year-old pointed drilling bit used at Burning Springs, West Virginia, during pioneer days. This is one of a very few pointed bits ever made.

The big bit on the right is the largest tool of its kind ever turned out by Acme Fishing Tool Company.

separate book was carried in THE OIL WEEKLY on August 7, 1931.

The second division of the book which has just been published, extending from page 129 through page 210, comprises material on Southwest Texas. Details of the contents of this section as published in a district book were given in this journal in the issue of April 3, 1931.

The succeeding sections of the book include the following: West Texas, beginning with page 211; Southeastern New Mexico, beginning on page 247; West Central Texas, beginning on page 269; East Texas, starting on page 279; North Louisiana and South Arkansas, beginning at page 313, and Mississippi, commencing on page 323.

A paid membership of $5 for the coming year in the National Oil Scouts Association of America entitles one to a copy of the above described large book, and anyone eligible for membership in the organization may obtain the book through payment of the membership fee. Although the active members in the association are principally scouts and land men, other persons engaged in the oil business, including geologists, engineers, drilling contractors, and independent operators, are eligible for membership.

Supplies of the books published by the national organization have been placed at different cities for the convenience of members in the various districts. Copies may be secured through personal call or by writing to any of the men who make up the personnel of the national association's officers for 1931. Those officers include John H. Langston, president, who may be addressed in care of Sun Oil Company, Dallas, Texas; Tom H. Terry, first vice president, located with The Texas Company at Seguin, Texas; L. S. McGee, second vice president, with Humble Oil & Refining Company, Houston, Texas; J. W. Selby, secretary-treasurer, who is with Shell Petroleum the executive committee, with Atlantic Oil Producing Company, Shreveport, Louisiana.

The year book was printed at Houston, Texas, by The Gulf Publishing Company.

Oretana Oil Company, represented by F. Kelly Dover, president, of Portland, Oregon, is contemplating entering the equipment manufacturing business with a new type of drilling apparatus calculated to reduce considerably the cost of deep drilling.

The inventors of the apparatus claim it will eliminate the long drill stem and the necessity for large derricks on deep tests, the bit being sent to the bottom of the hole by a cable. Attached to the bit, at the bottom of the hole, will be an electric motor. It is claimed the machine lays a casing of cement and puts same under pressure to harden as the bit goes down, shutting off water and shifting formations as the drill progresses.

Chicago Pneumatic Tool Company announces the removal of its office and service station at Seattle, Washington, from 1743 First Avenue South to 3201 First Avenue Corporation at Dallas, Texas; and C. A. Strahan, chairman of South and the appointment of C. Kirk Hillman as district manager. The new quarters are larger and permit carrying a complete stock of repair parts as well as representative items of the company's various products, which include air compressors, pneumatic tools, rock drills, electric tools, Diesel engines.

Republic Steel Corporation, Youngstown, Ohio, has issued "The Path to Permanence," a 64-page booklet classified under A. I. A. File No. 12 a 31 and gives up-to-the-minute information on Toncan copper Molybdenum iron sheets. It also illustrates various types of installations of this rust and corrosion-resisting sheet metal as well as several examples of performance under unusually severe conditions.

Copies of this interesting and informative booklet will be sent to interested parties on receipt of request to the company at the above address.

American Manganese Steel Company has moved its Chicago office from 333 North Michigan Avenue to Room 1414 McCormick building, 332 South Michigan Avenue, sharing office space with its parent company, American Brake Shoe and Foundry Company. Sales representatives available there are E. F. Mitchell and E. R. Dougherty. A telephone trunk line will be maintained from the general sales office in Chicago Heights to the new Chicago office, for the convenience of customers.

American Manganese Steel Company, Chicago Heights, Illinois, has secured the services of E. R. Dougherty, who will work with E. F. Mitchell, district manager, in the engineering and sale of Fahralloy castings in Chicago and the surrounding territory.

Mr. Doherty has had a substantial experience in this work, and is familiar with problems of the application of castings for high temperature and corrosion services, and their solution.

Internationally Famous...
ALEXANDRIA
HOTEL
THE VERY CENTRE OF EVERYTHING
The Alexandria Hotel is an affiliated unit of the Eppley Hotel Co's 22 Hotels in the middle west, Louisville, Ky. and Pittsburgh, Pa. and the Hamilton chain of Hotels in California.....
E.C. EPPLEY President
CHARLES B. HAMILTON Vice-President & Managing Director
CHICAGO OFFICE · 520 No Michigan Ave. Suite 422 .... Phone — Superior 4416
700 ROOMS
from $2.50 a day
CORNER OF FIFTH AND SPRING STREETS
LOS ANGELES

Squeaks from the Bull Wheel

▼ ▼ ▼

The first question the Scotchman asked after the introduction had been completed was: "From what land do ye coom?"

"The greatest in the world," was the reply.

"Puir bairn!" was the Scotchman's pitying comment. "Puir bairn, ye've lost yer accent!"

"Did a rabbit's foot ever bring you any good luck?"

"Sure did. My wife felt in my pocket once and thought it was a mouse."

A good definition of an oil prospector is a man who doesn't know whether he is four feet from a million dollars, or a million feet from four dollars.

"I'm sorry, but she said to tell you that she wasn't at home."

"Well, tell her I'm glad I didn't call."

Pat: "And whose funeral is that?"

Mike: "Kelly's."

Pat: "What? You don't mean to say that Kelley is dead?"

Mike: "Be Gorry, you don't think they're just practicing on him do you?"

Patient: "Is the doctor in?"

Attendant: "No, he stepped out for lunch."

Patient: "Will he be in after lunch?"

Attendant: "Why, no, that's what he went out after."

"He's the most brutally frank business man I know."

"How come?"

"When he remits by mail to pay a bill he writes: 'You have already found the enclosed check.'"

"Hello, pal, lend me a nickel to call up a friend, will you?"

"Here's a dime; call up all your friends."

Prospect: "I can't see you today. Come back Friday."

Salesman: "I won't be in town Friday."

Prospect: "Neither will I."

"This is a hard world," said Pat, as he knocked off for the day.

"Yis," said Mike, "Oi be thinkin' the same thing ivery toime I put me pick in it."

Little Isador Rosenberg laid his dime on the grocer's counter.

"Mister, I vant for ten cents some enimel crackers, and leave out de pigs."

Teacher—Now take the Jones family; there is mamma, papa and the baby. How many does that make?"

Johnnie—Two and one to carry.

"Well, Mrs. Johnsing," a colored physician announced, after taking her husband's temperature. "Ah has knocked de fever outen him."

"Sho' nuff," was the excited reply. "Am he gwine git well, den?"

"No'm," answered the doctor. "Dey's no hope fo' him, but you has de satisfaction of knowin' dat he died cured."

"Terrible links, caddy, terrible."

"Sorry, sir, these ain't links—you got off them an hour ago."

An Irishman, hearing of a friend who had a stone coffin made for himself, explained:

"Faith, that's good. Sure an' a stone coffin 'ud last a man a lifetime."

Axel Greese was busy shoveling up mud from around his rear wheels.

"Stuck in the mud?" asked a passerby.

"Oh, no," replied Greese, "my engine just died and I'm digging a grave for it."

Little Boy: "Mother, do they have oil wells in heaven?"

His Mother: "No, dear; it takes drillers to drill oil wells."

A clerk came forward to meet a gentleman who had just entered one of the swell hat stores on the avenue.

"What is your pleasure, sir?" said the clerk, rubbing his hands.

"Poker," said the gentleman, "but I came in here to get a hat."

"Who went to your picnic?"

"Two cousins, an uncle and all the ants."

The manager was taking the would-be purchaser out for a trial trip in a car.

Everything went smoothly and the car was as good as sold when suddenly she stopped dead. The customer alighted and lifted the bonnet, then started back. "Why, there's no engine in her," he shouted.

"There," said the manager, "that shows what a wonderful bus it is. Fancy, she's been running 25 miles on her reputation alone."

"Say, Bill, if you had five bucks in your pocket, what would you think?"

"I'd think I had somebody else's pants on."

IF YOU CAN'T LICK 'EM, JOIN 'EM!

If you are trying to beat the driller on the next lease and he keeps gaining on you . . . don't cuss 'em, join 'em!

How? Get the same kind of bit that he has. You can be sure that if he is drilling fast and the crew is happy, he is using an APPLEMAN.

WATER COURSES lead direct to cutting edge, producing maximum cooling effect.

SELF SHARPENING EDGES due to concavely formed blades.

SIDE WALL CUTTING: Cuts side wall as it drills. Accomplishes full round hole and well prepared side wall. Holds gauge longer. Reaming rarely necessary.

STRAIGHT HOLE: Less weight is needed to feed the bit. Drillers who use APPLEMANS for the first time are astounded at how straight a hole they can drill.

WRITE FOR COMPLETE INFORMATION

B.K. APPLEMAN
BEAUMONT, TEXAS

The New Hart Straight-Line Bailing Machine

At the head of its class stands this modern, improved bailing machine. In numerous instances it is doing the work of two or three tractor bailing machines due to its ability to move long distances at a minimum expense.

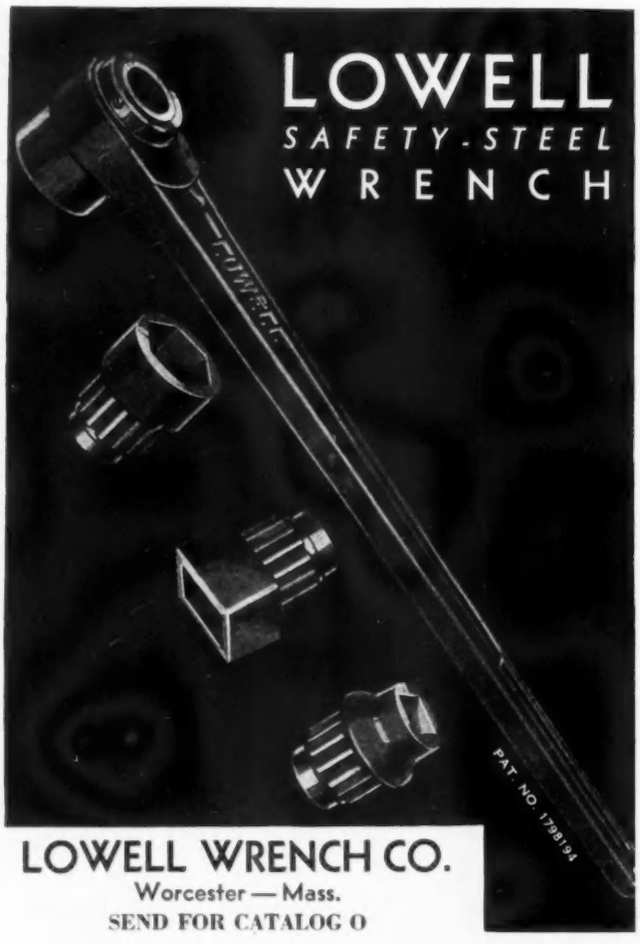
The Hart Straight Line bailing machine as shown in cut is mounted on a one and one-half ton, 157" wheel base, Ford truck. All equipment, including mast, bottom sheave, side sheave, top sheave, temper screw and crank arm are loaded on truck, with an abundance of room for extra equipment: can also be mounted on 3¼" oil field wagon with all equipment or used as stationary machine. By the aid of the snubbing sheave mounted on side of frame, and tow line on drum, this machine can easily pull itself up any grade to any location that a tractor bailing machine can go. The drum will spool over 4,000 feet of three-eighths inch wire line.

Operates on either natural gas or gasoline: Engine equipped with governor and machine is equipped throughout with ball and roller bearings: has double-acting brake that will automatically hold in any position. Three-speed transmission, which in high gear, will pull bailer 1,000 feet per minute. In low gear has sufficient power for spudding, cleaning out and pulling tubing.

Write today for prices.

Hart Brothers Machine Company

CLARKSBURG, WEST VIRGINIA



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Worcester — Mass.

SEND FOR CATALOG O

HUF-DUO PUMP

A Liner Working Barrel that's built for severe duty—yet is not expensive. A user writes, "The best Working Barrel I ever used. It pumped a sand well for sixty days that I had to pull every week." This is one of many testimonials.

You install it complete with Sucker Rods and you pull it—the same way.

IF IT'S PRICE
Huf-Duo is low in cost.

IF IT'S PERFORMANCE
Huf-Duo meets every requirement

From Your Dealer

THE CHARLES N. HOUGH MFG. CO.
Franklin, Pa.

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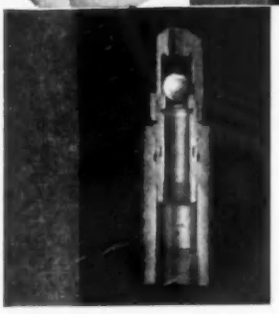
Every precaution has been taken to insure accuracy in listings in this Index to Advertisers, but last minute changes may result in omissions or erroneous listings for which we ask your indulgence. This index is for the convenience of readers and we do not assume liability for improper listings.

STRAIGHT FACTS

This is the thirteenth of a series and the first advertisement on Standing Valves



The patented Ritter Standing Valve does away with all "floating" or "traveling" troubles.

STANDING VALVES

There's an Axelson standing valve built to satisfactorily meet every pumping condition. Today as yesterday Axelson pump valves "STAND UP". Producers have come to expect more service from them.

Scientifically designed to eliminate the usual run of valve troubles, they reflect a careful workmanship and thorough inspection which spells — absolute interchangeability. Machined from steel of correct metallurgical analysis, Axelson valves "stand up" to excessive wear and corrosion.

Regardless of whether you seek increased fluid passage, easy pulling, non-sanding or non-floating, there is an Axelson standing valve built for your exact requirement.

In all of them you will find the highest quality materials, design and workmanship. From Axelson representatives you may expect an untiring and interested field service.

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P. O. Box 710, Vernon Station, Los Angeles
Tulsa—St. Louis
New York City, 30 Church St.

Mid-Continent and Eastern Distributors:
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Axelson Products Include:

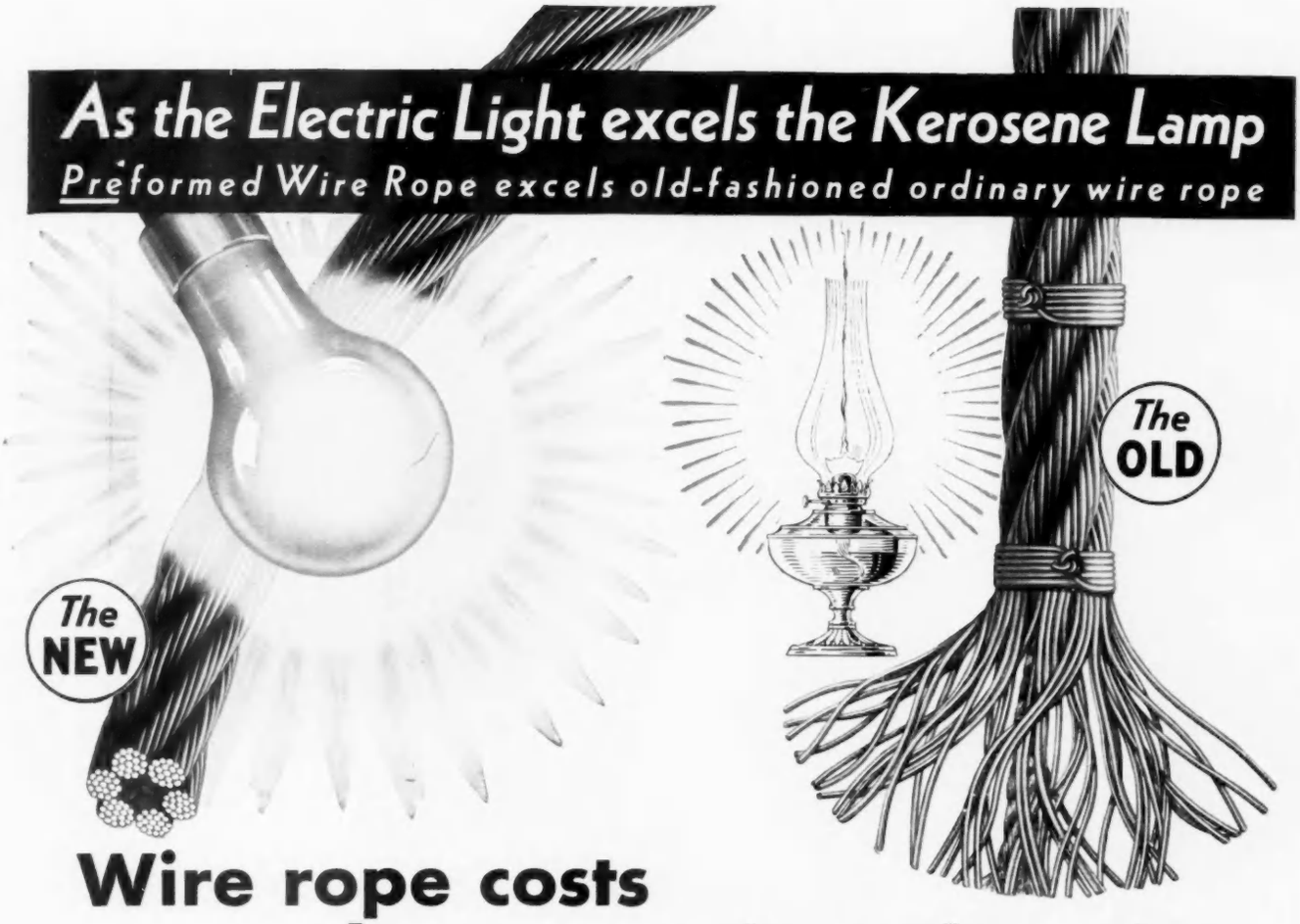
PUMPS	FITTINGS
SUCKER RODS	PULL RODS
VALVES	STUFFING BOXES

and other production equipment

AXELSON PUMP VALVES

As the Electric Light excels the Kerosene Lamp

Preformed Wire Rope excels old-fashioned ordinary wire rope



Wire rope costs deserve serious thought

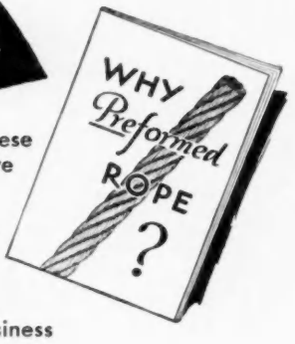
EVERY year many thousands of dollars are literally chewed up by internal stress in ordinary wire rope. Every year Tru-Lay Preformed Wire Rope is *saving* many thousands of dollars . . . because in Tru-Lay, internal stress is eliminated.

● Elimination of internal stress in wire rope is the first *basic* improvement in nearly a century. Service reports covering a wide variety of uses tell the story of 30% to 300% increased service. Whether these reports cover Tru-Lay service on power shovels or building elevators, rotary oil well drilling or hoists, Tru-Lay excels old-fashioned ordinary wire rope as the electric light excels the old-fashioned kerosene lamp.

● In Tru-Lay, internal stress is eliminated by preshaping the wires and strands so they lie naturally in position. Prove this by cutting Tru-Lay Preformed Wire Rope and note how the wires and strands lie normally in position.

● Then cut ordinary wire rope, and unless you seize the end with a firm wrapping of wire, the strands and wires straighten out and fly apart like a suddenly released clock spring. The difference is shown in the illustration above.

Send for this complete story



● 30% to 300% increased wire rope service is an important economic factor in these days when every dollar must give an accounting.

● Let us send you, or the man in your organization who is responsible for wire rope costs, a copy of "Why Preformed Wire Rope." Write for it on your business letterhead.

AMERICAN CABLE COMPANY, *Inc.*

New York Central Building, 230 Park Ave., NEW YORK CITY

District Offices: Chicago, Denver, Detroit, Philadelphia
Pittsburgh, Tulsa, San Francisco

The following manufacturers have been licensed to manufacture Preformed Wire Rope under the American Cable Company's Patents Nos. 1,513,583—1,518,253—1,643,150. (Other patents pending.)

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ACCO

An Associate Company of the American Chain Company, Inc.

TRU-LAY PREFORMED WIRE ROPE

30% to 300% Increased Service

Depending upon the character of the service and type of equipment

Now, *Core Recovery* is Compulsory

"In the good old days" to bring up a two or three foot core of questionable value from a ten foot run might have been overlooked. Not today. Now, CORE RECOVERY is a matter of urgent necessity; not merely in order to bring down coring costs, but to prevent excessive expense and unnecessary losses due to a lack of knowledge of conditions in the hole.

Elliott Core Drills always have been noted for their CORE RECOVERY in all fields, in all formations. "Long, informative cores at the lowest cost per foot of CORE RECOVERED" has been the oil country's tribute to them. Yet, regardless of costs or anything else, Elliott Core Drills can be depended upon to bring up the long, well-formed, informative cores—from every formation cored.

Efficient coring does not involve saving a dollar here and there on coring equipment. It means getting the best core, and the most core, with the least effort, and at lowest cost. To sum all that up in one word, say "Elliott".

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